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# Economic and Social Development

26th International Scientific Conference on Economic and Social Development -  
"Building Resilient Society"



Editors:  
**Vojko Potocan, Pavle Kalinic, Ante Vuletic**

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## THE PARADOX BETWEEN GOOD ECONOMIC MANAGEMENT AND SOCIAL UNREST IN BRAZIL: 2000 - 2015

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### **ABSTRACT**

*During the period 2000-2015, Brazil had a mostly positive economic growth experience. Despite suffering an economic slowdown during the late 2000s, Brazil was considered as one of the leading countries in the Latin American region. It became the sixth largest economy of the world by 2012, surpassing the United Kingdom. In social terms, Brazil also showed improvements. Data on unemployment, minimum wages and inequality were promising, showing that nearly 30 million people entered the middle class, minimum wages in the year 2015 were 117% higher than in the year 2000 and the Gini index decreased from 0.601 in the year 2000 to 0.5148 by the year 2014 (World Bank, 2017). All these improvements happened thanks to equality promoting social programmes. However, all these positive changes did not seem to end social conflicts. By the year 2011, 161 social conflicts were registered, positioning Brazil as a country with a medium level of violence (PNUD y Fundación UNIR, 2011). According to the UNDP, 7% of all Latin American conflicts happened in Brazil. At a macroeconomic level, conflict was on the rise during the years 2004-2014, despite all the country's efforts to improve its living standards (UNDP). This paper proposes that this paradox can be explained by analysing the situation of Brazil's Federal States and each region individually. One can see that the bulk of Brazil's GDP is concentrated on Federal States with megacities, while the rest of the country is mostly poor. This in turn shows that while rich regions were reducing their levels of violence, poor regions' violence indicators were on the rise during this period. It is important to state that the levels of violence are measured by the homicide rate per 100 thousand inhabitants. In addition, according to Helder Ferreira and Diogo Martins, corruption is a factor that increases and worsens social inequality in terms of income. Therefore, corruption is another factor that could explain the paradox (Ferreira & Martins, 2014).*

**Keywords:** *Brazil, economic growth, economic performance, social unrest, poverty, inequality*

### **Acronyms:**

BCB: Banco Central do Brasil.

BRICS: Five major emerging national economies - Brazil, Russia, India, China and South Africa.

CEPAL: Comisión Económica para América Latina y el Caribe

HDI: Human Development Index

HOI: Human Opportunity Index

IBGE: Instituto Brasileiro de Geografia e Estatística

IPEA: Instituto de Pesquisa Econômica Aplicada

LAC: Latin America and the Caribbean

OECD: Organisation for Economic Co-operation and Development

OPHI: Oxford Poverty & Human Development Initiative

UNDP: United Nations Development Programme

## **1. INTRODUCTION: AN OVERVIEW OF BRAZIL'S ECONOMIC HISTORY DURING THE LATE 20TH CENTURY**

The economic and social situation of Brazil during the period 2000-2015 was characterized by sustained growth reflected in an annual rate of economic growth of 2.92% and, above all, by the inclusion and expansion of social programmes. Although during this period Brazil enjoyed an economic growth rate slightly lower than the Latin American average (2.94%), it was during the period between 1968 and 1973 when it really surprised the world by growing at an annual rate of 11.2%, according to the World Bank. From the late 1960s and early 1970s, Brazil began to take on a leading role in the development of the world economy and the Latin American economy. According to the World Bank, Brazil grew at an annual average rate of 8.4% during the 1970s. This sustained growth was due to rapid industrial growth, capital market reform, institutional changes, increased savings and investment, increased foreign debt, among others (Mendonça de Barros & H. Graham, 1978, p. 5). It should be noted that, within the promotion of growth and development of the 1970s, the government put a lot of emphasis on developing human capital. They did this by supporting education programmes for highschool graduates, promoting of scholarships to study and training abroad and by hiring foreign specialists to be teachers or consultants (Enders, 1980, p. 408). The decades after the 1970s were characterized by slow economic growth, both for Latin America and Brazil (Fundación BBVA, 2010, p. 15). At the regional level, during the 1980s, inflationary shocks in most Latin American countries put a stop to regional economic growth, which was reflected in the fluctuation of the annual growth rate of around 1.5% (World Bank, 2012).

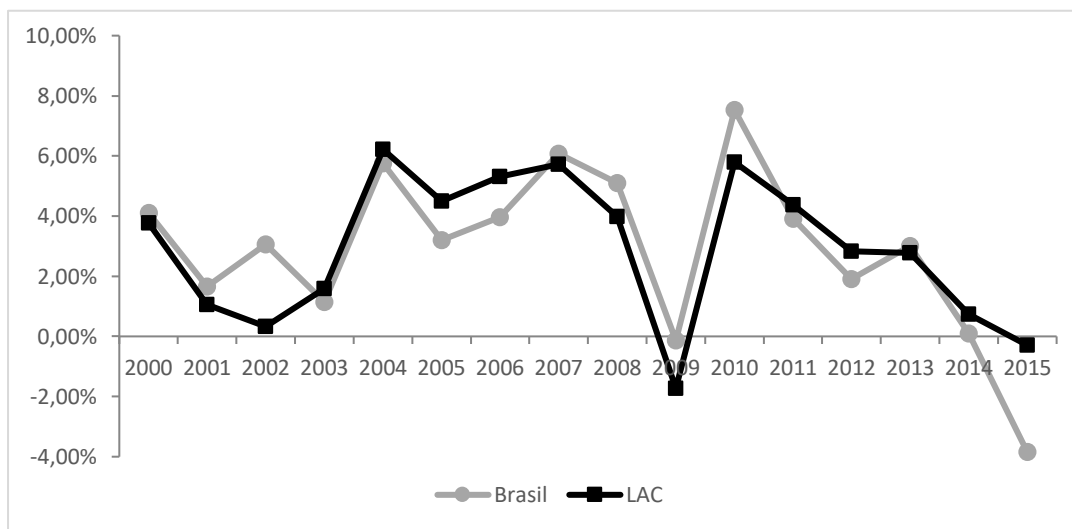
Then, during the 1990s, the instability created by the crises in Mexico, Asia and Russia affected the region, which grew annually at a rate of 3.1% (Larracharte, 2010, p. 70). Given the regional context, the situation in Brazil was marked equally by the internal crises. During the 1990s and early 2000s, the Brazilian devaluation (1999) and then the energy crisis (2001) were important shocks that affected Brazil's performance to the point of growing at a lower annual rate than Latin America (2.3%), according to the World Bank. In spite of this, in the first decade of the present millennium Brazil became a star of the world scene when it became part of the BRICS countries. Its macroeconomic figures during the period were enough to join the club formed by India, Russia and China. However, for the first five-year period of the second decade of the 2000s, Brazil fell into economic slowdown caused by a fall in international commodity prices, a global economic slowdown and a lack of dynamism in the Brazilian economy. What were the economic sectors that ignited the dynamism fuse in Brazil? Which factors stopped this development? To what extent does this growth translate into welfare for all Brazilians? This work aims to bring an answer to all of these questions. But most importantly, it seeks to propose a response to the following question: If Brazil's macroeconomic environment was favourable, then why can one find high levels of social unrest during the period 2000-2015? This paper is divided into three parts. The first presents an analysis of the main macroeconomic figures of Brazil from the years 2000 to 2015, as well as a review of the main indicators of the labour market. The following section discusses social indicators on poverty and inequality and compares Brazil's results with those of other Latin American countries and the world. Finally, the third section is a review of the types of social conflict and their intensity in the country.

## **2. MACROECONOMIC AND LABOUR INDICATORS**

Three stages within the period of analysis can be distinguished: The stagnation period, the economic boom period and the downturn period. The stagnation period occurred between 1997 and 2003. At the time, several crises were developed in the world: Mexican, Asian and Russian crisis; therefore, the average economic growth rate of Latin America was 1,6 percent per year. The second period was represented by the remarkable economic boom that generated an

average annual economic growth rate of 5.4 percent between 2003 and 2011, mainly due to the improvement in terms of trade, government's economic stability, and so on (Fundación BBVA, 2010, p. 15). The third period starts from 2012 until 2015, and is characterized by a global economic downturn, which adversely affects the growth of the country due to the fall in the commodity prices, the rise in oil prices and the reduction of the Consumers Confidence Index. (Banco Central do Brasil, 2015)<sup>1</sup> Figure 1 shows the periods described in the previous paragraph. It must be emphasized that, in addition to external shocks such as the financial crisis of 2008, Brazil was affected by several internal shocks. One of them was the energy crisis (2001), which resulted in declining three percentage points GDP growth rate (4.3% in 2000 vs. 1.3% in 2001) (World Bank, 2012). Another influential factor was the presidential elections in 2003 and 2010 because these were characterized by distrust of market agents towards presidents Lula da Silva and Dilma Rousseff. A first argument that explains the growth experienced by Brazil between 2000-2010 was the rising total factor productivity (TFP). The evolution of TFP had positive variations during the period of boom and economic growth, because it played an important role in the growth reactivation after the initial period of crisis described previously. In Brazil, TFP accounted for a third of Brazilian economic growth together with the increase in hours worked, which contributed 1.8 points to the country's growth rate (Fundación BBVA, 2010, p. 9). However, from 2011 to 2015, Brazil had presented a decrease in total factor productivity. (The Conference Board, 2015). Thus, TFP is an important indicator to explain Brazil's growth during this period.

Figure 1. GDP growth rate, Brazil and LAC: 2000 - 2015 (annual %)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (World Bank, 2017)

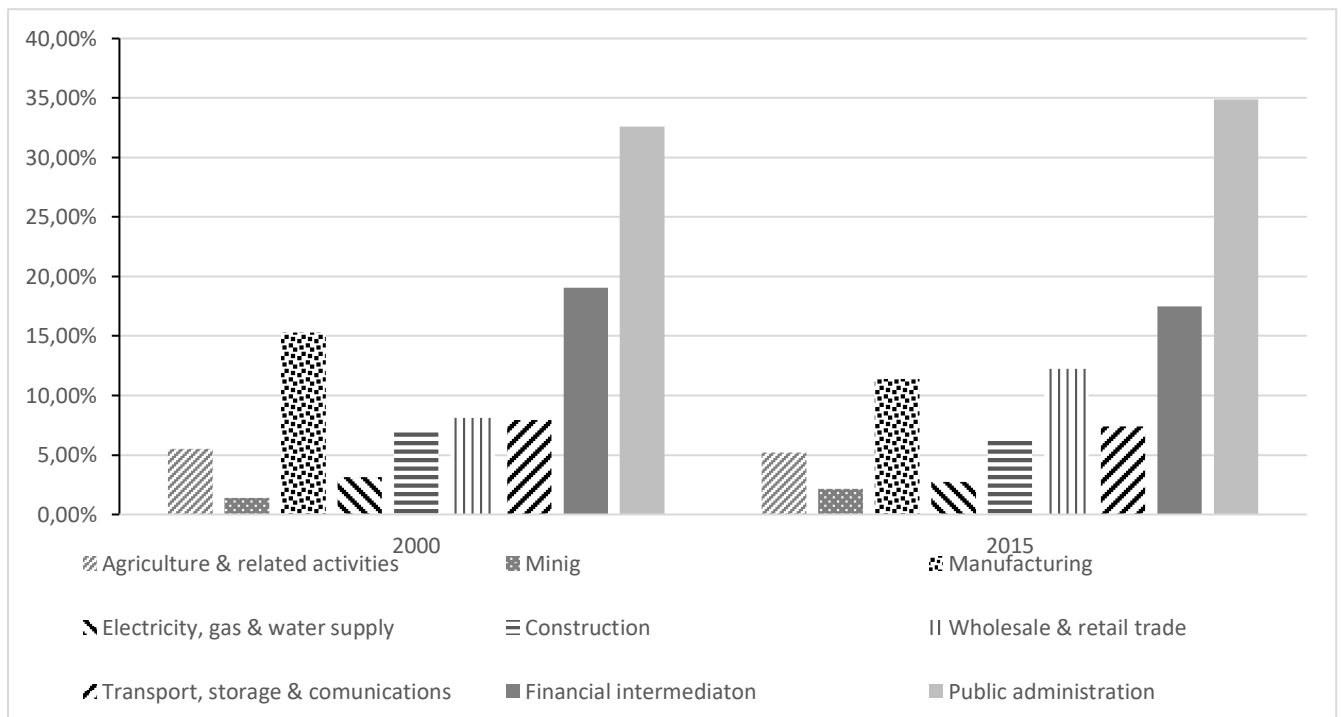
Another argument that explains Brazil's growth lies in the participation of key sectors within the composition of GDP. For example, the financial intermediation sector had an average participation of 16.39%, followed by the manufacturing sector (14.93%) and trade (11.24%) between 2000 and 2015. Although the participation of these sectors was important for the Brazilian economy, the sectorial output fluctuations point out more sectors as responsible for the economic growth experienced by Brazil. An example of that is the extractive sector, which had an average increase of 50.8% after the international financial crisis between 2009 and 2012. In figure 2 one can observe the effects mentioned above. The increasing role of sectors such as

<sup>1</sup> The same documents were consulted for the years 2012, 2013 and 2014.



extractive industries only demonstrates the deepening of the trend that was experienced in Brazilian industry during the period 2000 - 2011. This trend was oriented to the specialization in sectors based on the intensive use of natural resources (Aparecida Feijó & Tostes Lamonica, *Importancia del sector industrial para el desarrollo de la economía brasileña*, 2012, p. 134), which in turn the most technology intensive sectors relative participation was diminished. This is a common trend in developing countries called "deindustrialization", which allowed the diversification of the national economy and sustained growth in the short term. Although it did not have immediate negative effects, it caused a dependence on foreign markets to guarantee the stability of the country. (Mattos & Fevereiro, 2014, pp. 37-38) This dependence is exactly what explains the downturn of Brazil between 2012 and 2015 due to falling international commodity prices and the international economic downturn in 2012. Furthermore, mining sector growth fluctuations also reflect world economy production oscillations. In such a way, analyzing both the TFP and the participation of key sectors within the composition of the GDP, explain the different periods mentioned at first.

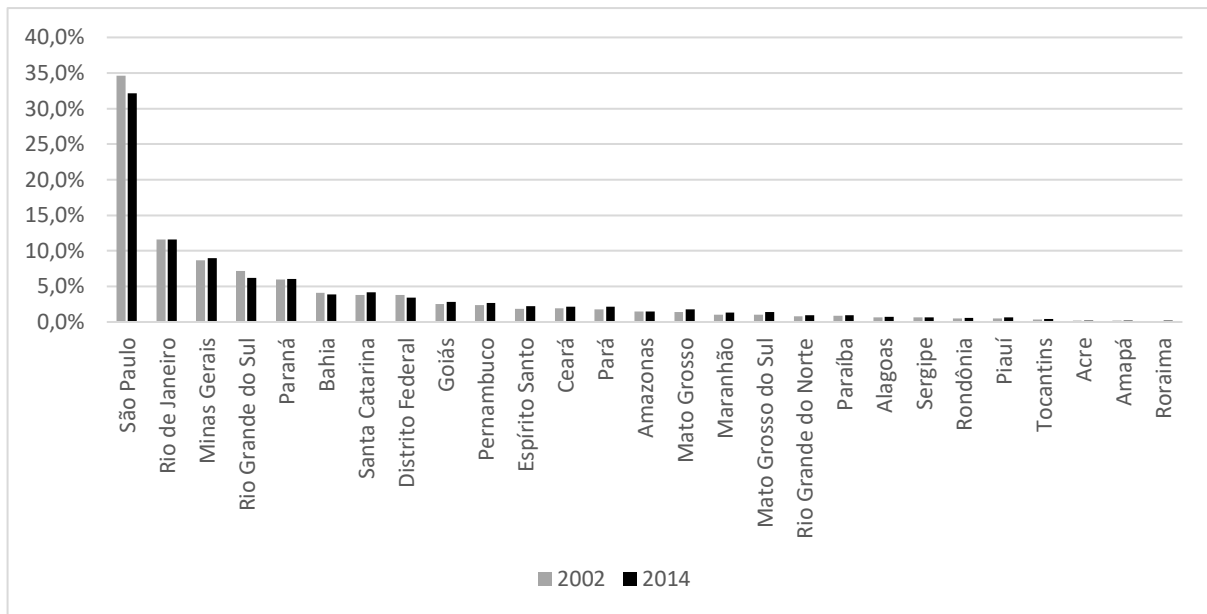
Figure 2. Evolution of participation of key sectors within the composition of GDP, Brazil: 2000 - 2015



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (CEPAL, 2016)

Up to this point, some of the economic growth sources in Brazil were analysed; however, how did the national economic experienced growth translate itself into growth among the different states? It is necessary to do a thorough analysis about the relative participation of each Federal State in the GDP, wherein one can clearly see that a high concentration in resource generation in the states of Sao Paulo, Rio de Janeiro, Minas de Gerais and Rio Grande do Sul exist. This is mainly due to the demographic, political and economic importance of the Southeast and the South region.

Figure 3. Relative participation of each federal state in the GDP, Brazil: 2002 and 2014  
 (Annual %)

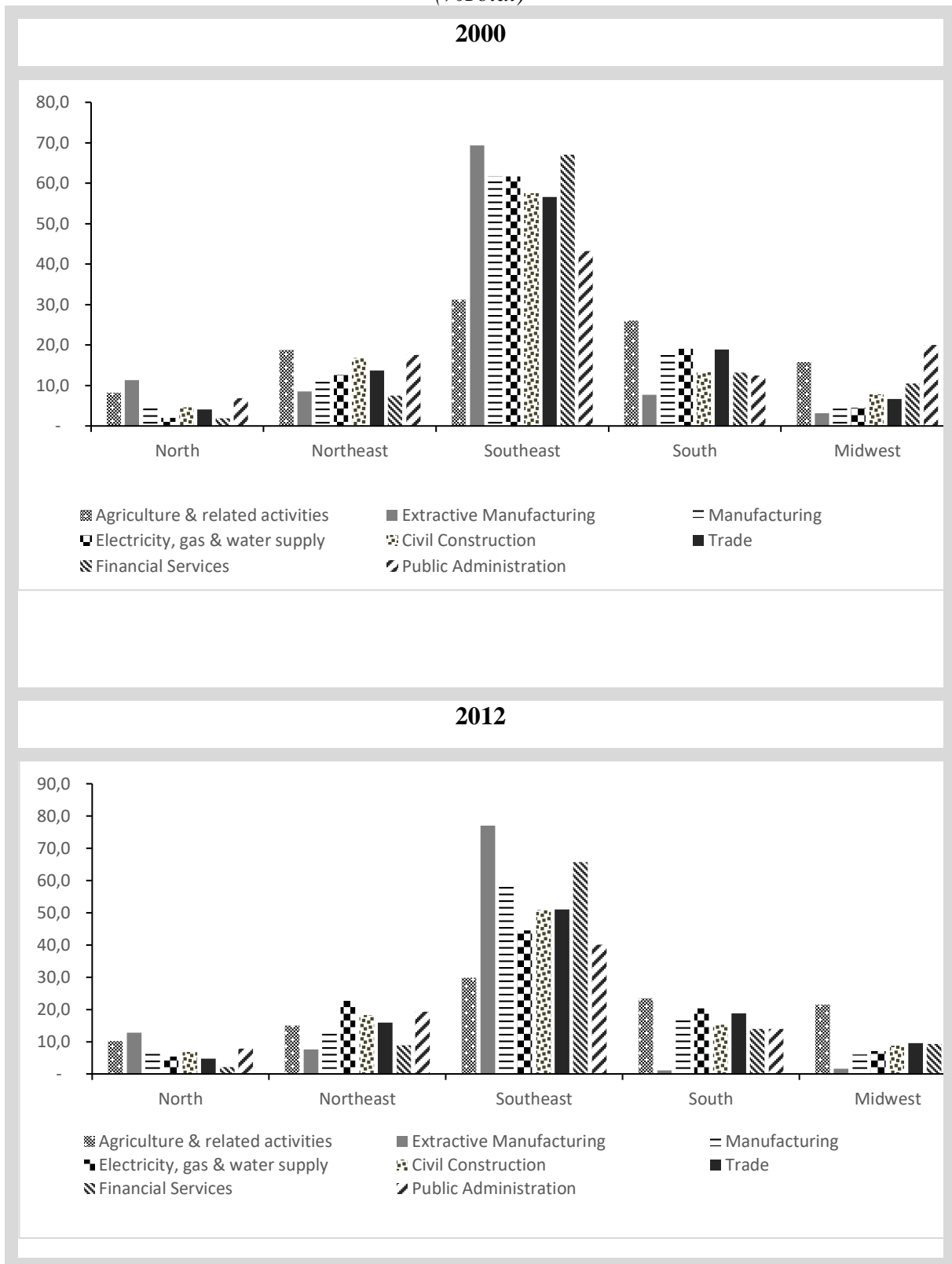


Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (IPEA, 2017)

In general, the growth perceived in each federal state and in each region of Brazil during the period 2000-2010 was uneven. The states of the Southeast region contributed with 56 percent of the Brazilian GDP during the period of analysis, while the North region did so only with 5 percent (IBGE - Instituto Brasileiro de Geografia e Estatística, 2011). Why did one region grow much more than the others? An analysis of the contribution of sectorial GDP by region shows that the Southeast region contributed to sectorial GDP growth the most. In the manufacturing, financial services and construction sectors, the contribution of the Southeast region was more than 50% of the GDP of several region. For example, this region accounted for 71.1% of the sectorial GDP of the extractive manufacturing in 2010. It should be noted that since 2000, the composition of main activities by region has remained constant. Therefore, the economic development of the Southeast region has stood out more than other regions of the country.

Figure Following on the next page

Figure 4. Regional participation in GDP by sector and by region, Brazil: 2000 and 2012  
 (%Total)

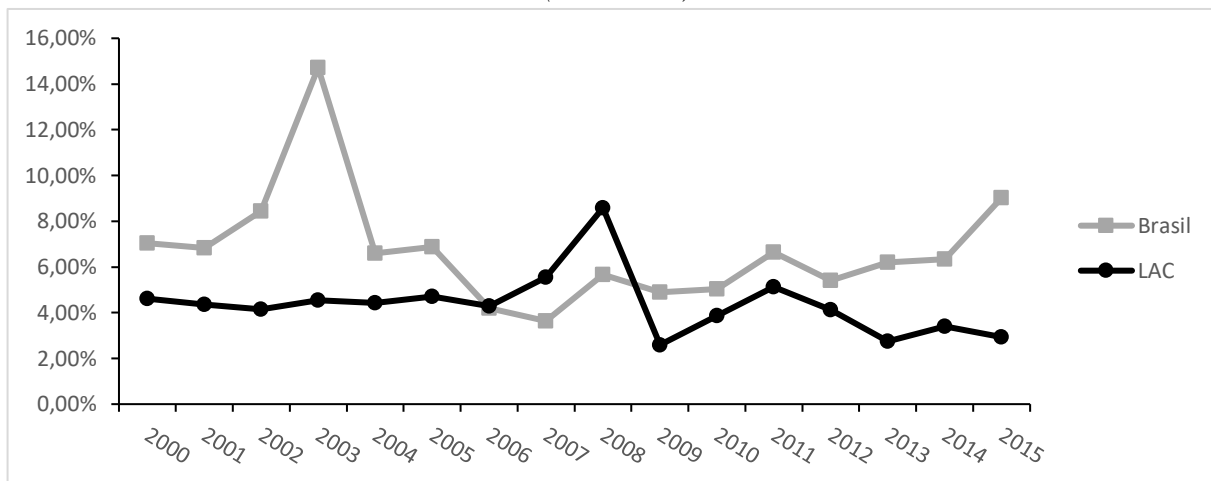


Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (IBGE, 2017)

The phases of economic growth in Brazil between 2000 and 2015 were analysed through internal production data.

Thus, through an analysis of other relevant variables such as inflation, exports and public, private and foreign investment, the Brazilian economic evolution can be better understood. Since 1999, Brazil has maintained an inflation targeting scheme (Garcia, 2007, p. 50). This scheme, adopted by several Latin American countries, allows to control for inflation fluctuations. Furthermore, it allows to have an efficient monetary policy. Despite this, inflation rates were high due to different external factors such as the Brazilian energy crisis; the effects of 11th September 2001; the Argentine crisis during the period from 2001 to 2002; and the presidential elections in 2003 (Cuevas Ahumada, 2008, p. 37). In figure 2 one can see the Brazilian inflation trend.

Figure 5. Inflation, Brazil and LAC: 2000 – 2015  
(% Annual)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (World Bank, 2017)

Although Brazilian inflation was characterized by greater fluctuations than the Latin American average, how did these variations affect the poorest? Reviewing the basic consumption basket of the poorest families in Brazil, it can be observed that in 2004, a Brazilian could buy 1.6 basic baskets with a minimum wage (Côrtes Neri & De Moura, 2005, p. 40). However, in 2012, due to wage increases, the purchasing power of a Brazilian made it possible to buy 2.2 basic baskets with a minimum wage (Portal iProfesional, 2011). In the case of net exports, although they have remained at negative levels, they declined between 2000 and 2011, according to World Bank data, after the policies of trade liberalization initiated during the government of Henrique Cardoso and Lula da Silva. In addition to trade friendly policies, in this period Brazil benefited from the rise in commodity prices, favouring its local exports. This brings an idea about that commodity prices are a key factor for Brazil's exports. The increase in commodity exports revalued the Real, the local currency, which reduced manufacturing exports. The share of manufactures in total exports decreased from 59.0 percent in 2000 to 36.1 percent in 2011. In terms of employment, this meant a reduction of the percentage of the total urban manufacturing employed population from 13.3 percent in 2000 to 11.8 percent in 2010 (IBGE - Instituto Brasileiro de Geografia e Estatística, 2011). This contraction was mainly observed in the Northeast, a region that held the largest number of the poor population in Brazil. In 2007, poverty in this region was 39% (Salama, 2011, p. 10), while the national poverty was 24.24%, according to IPEA database. During the years 2002 to 2012, about 30 million Brazilians were part of the middle class, which sought to help reduce income inequality, despite the turbulent times in Latin America (Sharma, 2012, p. 80). As it can be seen, between 2000 and 2011 the most affected region by inflation was the Northeast and its one of the reasons why this region

held the largest number of the poor. However, between 2012 and 2015, the global economic downturn, specially the reduction in China's demand for commodities, together with the high interest rates (around 10%), destabilized the Brazilian economic growth. This provoked a sustained economic downturn that caused a -3 percent fall in GDP rate. This has occurred despite optimistic forecasts of education, democratic stability, and inequality reduction mentioned by Shannon O'Neil, Richard Lapper, Larry Rohter, Ronaldo Lemos in the middle of 2012. Thus, Brazil's economy depends on China's economic activity. How did the growth and economic development of one of the largest countries in the region translated into welfare for its inhabitants? Observing the behaviour of the labour market, it is possible to approximate a response. Labour reforms began in Brazil due to the constitutional change in 1988 which allowed individual and collective rights to be strengthened. In the same way, the change encouraged the preservation of some mechanisms for the participation of workers in the protection of their rights, and, specifically, labour union was consolidated (Ruiz Durán, 2003, p. 51). As a result, the reforms of 1988 marked a key stage in the Brazilian labor market. To analyse correctly the labour market situation of Brazil, three fundamental factors must be considered. First of all, which sectors held the largest number of workers? Then, what were the evolutions of wages and unemployment rates? And finally, if that work qualified as decent. The analysis of these variables allows to know the situation of the Brazilian labour market and the main challenges that it faced. In 2002, the average activity rate was 56.7 percent of the labour force working age group, and in 2010 it was 57.1% (CEPAL, 2010, p. 7). Figure 6 shows the distribution of the labour force by economic activity in 2014. It can be observed, on one hand, that in the urban areas, the economic activity with the largest number of workers was Other Services (29%)<sup>2</sup> followed by Trade Activity (26%). On the other hand, in rural areas, the economic activity with the largest number of workers was Agriculture (64%), while the rest of activities did not even constitute 10% of the structure of the labour force, except in the case of Other Services (13%). This shows a clear difference between the skills required for work in the urban and rural sectors. Thus, while the urban sectors concentrate a greater number of jobs that required higher educational qualification and generated added value, most of the rural labour force is dedicated to less qualified and remunerated jobs, mainly to the extraction of commodities.

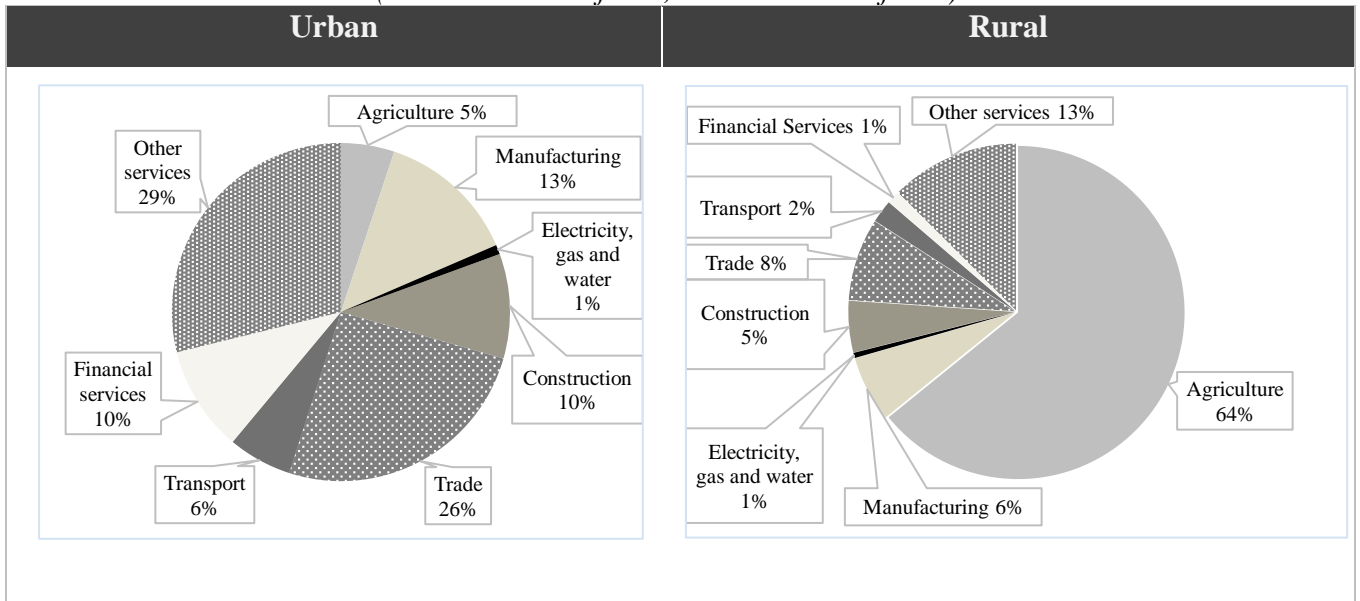
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<sup>2</sup> It includes service activities related to computer science, architecture and engineering, as well as legal and accounting consulting, publicity, market research, R&D and agricultural and mining services. An increasing share of these services makes intensive use of knowledge and transform strategic inputs so as to increase productivity and competitiveness of companies (CEPAL, 2016).



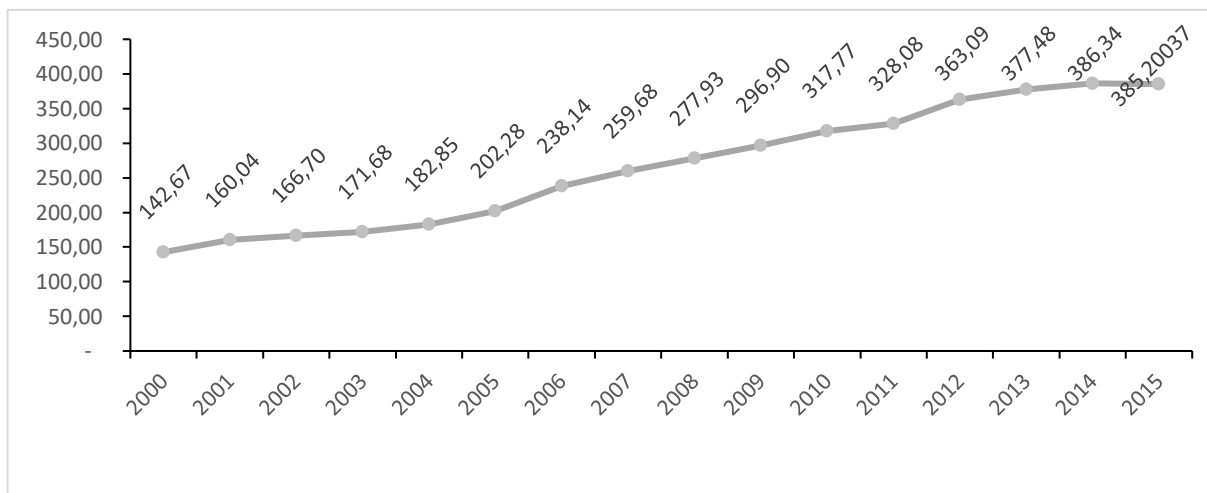
Figure 6. Structure of total employed population, by sector of economic activity, 2014  
 (% urban labour force, % rural labour force)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (CEPAL, 2016)

One of the many indicators that reflects the situation of the labour market is wages. In the case of Brazil, the average annual real wage rate has been rising steadily since 2000. The increase involved two possible cases. First, that conditions in the labour market have been improving and productivity has been increasing between 2000 and 2010. Another possible situation is that, as in several Latin American countries, the increase has occurred due to the president's orientation poverty reducing instruments. Until 2004, there was no formal criterion for the readjustment of minimum wages in Brazil (Côrtes Neri & De Moura, 2005, p. 8). Since then, the government of Lula da Silva implemented massive social policies, such as the Bolsa Familia project and the minimum wage rise (Dos Santos A. , 2012). This policy was also followed during the Rousseff government; thus, is relevant to see figure 7 that shows the evolution of the minimum wage between 2000 and 2015.

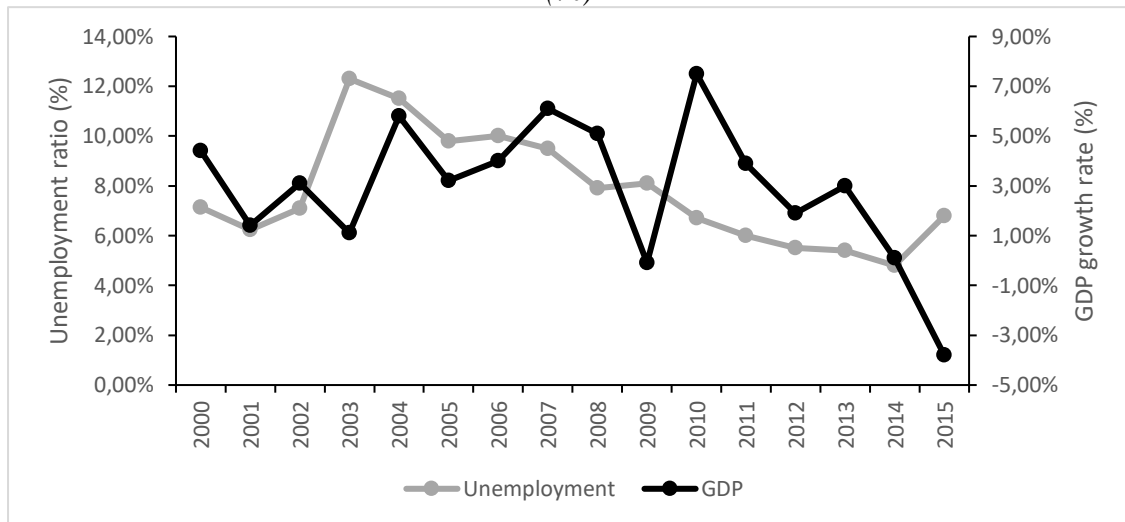
Figure 7. Minimum wage, Brazil: 2000 – 2015 (Dollar PPP)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (IPEA, 2017)

As for the unemployment rate, the labour market suffered a sharp deterioration after the year 2009 due to an increase from 7.9 percent in 2008 to 8.1 percent in 2009. As can be seen in figure 8, the impact of the crisis affected the growth rate of GDP more than the unemployment rate. The rate of the unemployment deceleration rate during the analysis period was -1.5 percent on annual average. As can be seen in figure 8, in 2009, when the GDP growth rate was negative (-0.1%), unemployment recorded a rise. This reflects a good management of the crisis of 2008 by the government of Da Silva because it could take advantage of the moments of economic growth to promote employment and wages in the country.

Figure 8. Unemployment to population ratio and economic growth rate, Brazil: 2000 - 2015 (%)



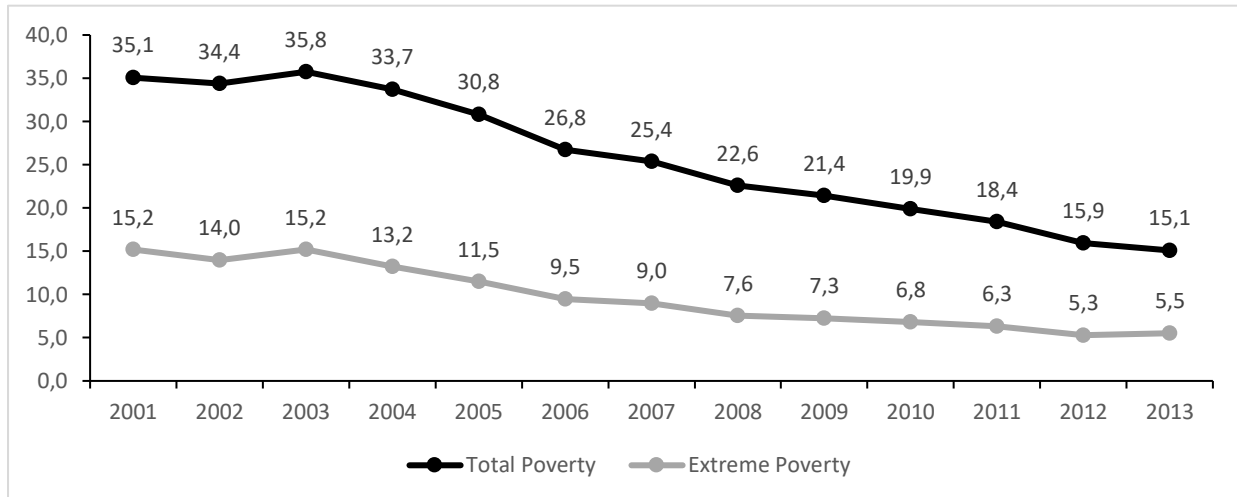
Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (Banco Central do Brasil, 2015)

### 3. POVERTY AND INEQUALITY: INDICATORS AND POLICIES

The Brazilian poverty reduction model allowed poverty indicators to improve substantially during the period 2000-2015. The rate of monetary poverty and extreme monetary poverty evolutions are shown in Figure 9. It can be seen that during 2001 and 2014, both rates of poverty and extreme poverty were reduced from 20% and 9.7% to 15.1% and 5.5%, respectively. These improvements can be attributed mainly due to two reasons. On one hand, Brazil's economic growth during the 2000 decade allowed 17.5 million Brazilians to cross the poverty line (Mendonça de Barros & H. Graham, 1978, p. 80). On the other hand, the conditional transfer programs implemented during these years collaborated with the reduction of poverty and the inequality levels. So, from a macroeconomic point of view, Brazil showed a great deal of improvement in reducing the rate of poverty and extreme poverty in the country.

Figure following on the next page

Figure 9. Poverty ratio and extreme poverty, Brazil: 2001 - 2013 (% of population)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (CEPAL, 2016)

However, due to the Federal States and regions unequal share of GDP, it is imperative to analyse poverty levels in more detail. Has there been similar poverty reduction rates among the 27 States? Were the poorest states able to reduce poverty faster than the richest ones, in order to achieve some convergence? Table 1 shows the level of poverty and extreme poverty by Federal States for the period 2001-2014. One can see that poverty rates between the northern and southern regions showed great differences. Southern states generally accounted for lower rates of poverty, such as in Rio de Janeiro and Mato Grosso do Sul. Although the two regions have reduced their level of poverty during this period, the bulk of the country's unemployed population was found in northern Brazil. However, this region also showed a greater reduction of poverty during those years. For example, the region of Tocantins reduced its poverty level by 34.9 percentage points. In terms of extreme poverty, the South presented both lower rates and a greater total reduction of poverty, being Rio Grande do Sul the Federal State with the greatest reduction of extreme poverty (20.26%). In general, this table shows that there were significant reductions in the levels of poverty throughout the majority of the Federal States and thus Brazil was directed towards being a more egalitarian country. Nevertheless, by 2014, the Northern States still had worrying poverty rates.

Table following on the next page

*Table 1. Poverty and extreme poverty rates, Brazil: 2001 and 2014 (% of Brazil's total population)*

Federal State	Poverty		Extreme Poverty	
	2001	2014	2001	2014
Acre	32.76	20.45	14.91	6.47
Alagoas	55.82	25.21	28.84	9.66
Amazonas	39.13	17.89	17.04	5.19
Amapá	15.27	11.00	6.68	2.15
Bahia	49.98	18.68	24.01	6.37
Ceará	48.97	20.55	23.46	8.30
Distrito Federal	19.53	4.18	6.45	1.14
Espírito Santo	23.28	4.83	7.66	1.67
Goiás	21.54	3.79	6.44	1.09
Maranhão	56.00	27.18	27.94	10.33
Minas Gerais	20.98	4.93	7.13	2.19
Mato Grosso do Sul	19.09	2.86	6.08	1.14
Mato Grosso	19.83	3.67	6.96	1.64
Pará	40.69	20.02	14.58	5.98
Paraíba	53.58	18.67	24.17	7.11
Pernambuco	51.11	20.27	24.58	7.11
Piauí	52.46	19.56	27.73	7.47
Paraná	23.41	4.24	7.98	1.46
Rio de Janeiro	18.52	6.16	5.78	1.61
Rio Grande do Norte	45.20	17.46	19.99	6.05
Rondônia	31.63	10.97	11.93	3.80
Roraima	35.47	13.50	14.40	2.96
Rio Grande do Sul	19.74	5.26	6.12	1.70
Santa Catarina	12.43	3.12	3.52	1.21
Sergipe	45.81	18.22	19.71	4.46
São Paulo	15.94	5.22	5.34	1.99
Tocantins	42.75	15.33	17.06	5.57

*Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (IPEA, 2017)*

While monetary poverty is an indicator accepted by government statistical offices, it is important to draw attention to a measure that can enrich the analysis: multidimensional poverty. This measure arises in response to the limitations of the monetary poverty approach, since the latter only evaluates household spending over a given period of time. Meanwhile, multidimensional poverty is based on an index generated from 9 components, which relate to the populations health, education and other living conditions (Oxford Poverty and Human Development Initiative, 2013). This allows one to identify aspects that other indicators normally do not take into account and improve the effectiveness of public social spending. According to Oxford's Poverty & Human Development Initiative (OPHI) calculations, with data collected from 2003 to 2006 household surveys, Brazil reduced poverty, from a multidimensional standpoint, from 8.5% to 2.7%. While this measurement incorporates aspects that go beyond family income, such as life quality and access to basic services, the incidence of multidimensional poverty was lower than income poverty in 2006, in both the US\$ 1.25 and US\$ 2.0 per day income poverty line. The deprivation intensity- that is, the average percentage of deprivations suffered by people living in multidimensional poverty- in Brazil was 39.3%. This way, the Multidimensional Poverty Indicator (MPI) was 0.011, being the third Latin American country with the lowest MPI, after Uruguay and Ecuador. In relation to social inequality in Brazil, although the country has been known to have one of the highest levels of inequality in the world (Lustig, López-Calva, & Ortiz-Juarez, 2011, p. 5), there was a tendency of improvement in the distribution of income of the Brazilian population during the 21st century. According to the World Bank (2015), the Gini index fell from 0.601 in 2000 to 0.5148 in 2014, thus indicating a lower income inequality among citizens. This was possible because the country implemented various instruments to fight poverty and inequality such as increases in the real minimum wage, labour market regulations, improvement of public services, increased social spending, among others (Holmes, Hagen-Zanker, & Vandemoortele, Social protection in Brazil: Impacts on poverty, inequality and growth, 2011, p. 3). This way, Brazil was known for having one of the best social protection systems among middle-income countries. Despite the reduction of inequality since 1990, the overall level of inequality continued to be very high in Brazil, to the point that it presented a Gini index that was still 0.2 units higher than the average of OECD countries by the end of the decade of 2000 (OECD, 2011, p. 51). There was a decline in income concentration in the highest decile of just over 6 percentage points, a share that was earned by the lowest and middle deciles of the population. Given the fact that labour income explained 60% of inequality (Scorzafave & Carvalho de Lima, 2010, p. 10), the improvement seen in income distribution can be explained by the reduction of the wage gaps between similar workers in metropolitan areas from workers in urban and rural areas. This also happened between primary sectors from other productive sectors of the economy (Lustig, López-Calva, & Ortiz-Juarez, 2011, p. 7). Despite the clear trend towards equal income, social inequality remained a latent problem among the Brazilian population. Apart from the poverty rate and the indicators of income inequality, there are other indices that can further complement the analysis of the situation faced by the Brazilian population. These indices incorporate different points of view and help to identify the major shortcomings of individuals. The first one is the Human Development Index (HDI), which uses indicators of health, education and income (UNDP). Brazil's HDI increased from 0.669 in 2000 to 0.754 in 2014, placing it 79th out of the 187 countries in the Index, 9th place between the Latin American and Caribbean and 2nd place between the BRICS countries (PNUD, 2013, pp. 2-4; Raheja, 2015, p. 639). Therefore, human development in Brazil showed improvements to the year 2014. However, there is still a long stretch to reach a better standard of living in the population. Second, the Human Opportunity Index (HOI) is a complimentary indicator that tries to answer the following question: "how influential are personal circumstances in children's access to basic services necessary to achieve a productive life?" (World Bank, 2008, p. 9).

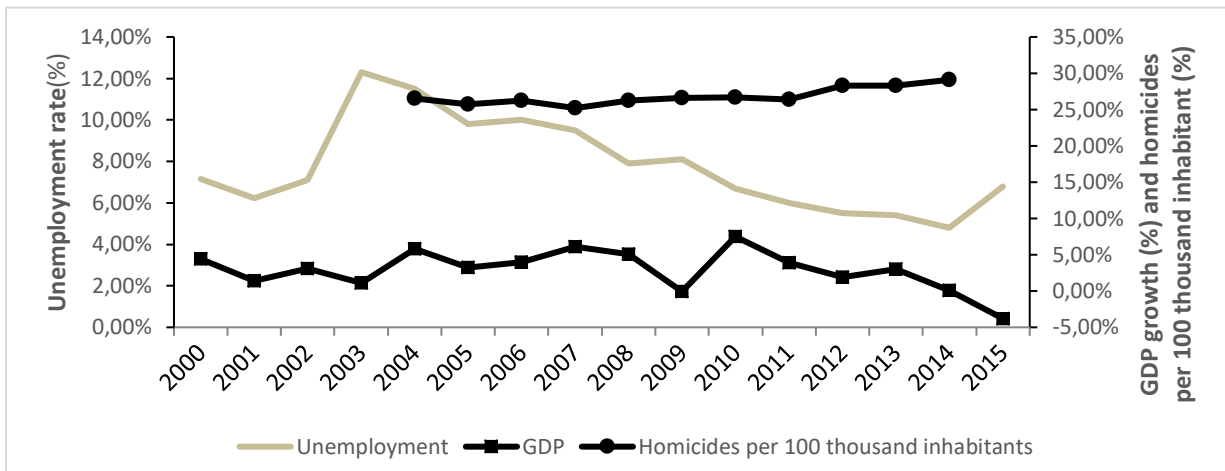
That is, it seeks to discover if, for example, race, illiteracy of the mother, or the father's salary, influence the access to opportunities of children. For the year 2014 Brazil reached a HOI of 65.172, only surpassing Colombia, Nicaragua, Honduras, Guatemala and El Salvador in Latin America. (World Bank, 2016; World Bank, 2012). This shows a worsening, of Brazil's HOI, since in 2008 it had a HOI of 72, surpassing Peru and all the aforementioned countries. Brazil's weak point was found in the variable "complete sixth grade in due time", since it did not guarantee 50% of the opportunities necessary to comply universally and under the criterion of equality (World Bank, 2008, pp. 22-23). In conclusion, one can see a clear trend between these indicators. There is a clear trend towards positive development in Brazil in almost all the indicators shown above, mostly if one analyses the data between the Latin American countries. Nevertheless, there are still several notable problems that the country had to address, mainly in the topics of inequality and human opportunities.

#### **4. THE WAY OF SCAPE: SOCIAL CONFLICT**

As previously discussed, Brazil has shown sustained growth during the period 2000-2015, to the point of being positioned as one of the potential new world powers. This has not been solely due to its economic development. Brazil also sought to prioritize social inclusion policies. The level of conflict registered during 2009 and 2010 placed it as a country with medium-level social conflict (PNUD y Fundación UNIR, 2011). This implies policy challenges aimed at institutional strengthening that allows for an improvement in communication mechanisms and conflict resolution. However, at macroeconomic levels, it seems that neither the reduction of unemployment nor the growth of the national GDP could increase the welfare of the population, reflected in the violence reduction in the country. In order to be able to empirically analyse the levels of violence in Brazil, one has to resort to using data on homicides. This is the most pertinent indicator of violence that can be used due to the historical lack of data in Brazil and also because the high incidence of annual homicides during the analysed period were alarming. (Cerqueira & Santa Cruz, Ipea, 2015). The first factor ceases to be so relevant over time; however, during the seventies there was not even a mention of urban violence problems in Brazil, to the point that the foreigners assumed that it was a peaceful and non-conflicting nation (Misse, 2010) In order to reflect this idea, the following figure is shown. It includes the unemployment rate and the growth rate of Brazil's GDP over the period 2000-2015 and the homicide rate per 100 thousand inhabitants nationwide over the period 2004-2014. It can be noticed that, in general, the GDP showed growth over the years and in turn unemployment has had a downward trend. However, it can be observed that the homicide rate per one hundred thousand inhabitants has increased from 26.5% in 2004 to 29.1% in 2014. Thus, it can be noticed that at the macro level, the paradox appears: no matter how much the GDP grows or how much unemployment is reduced, the level of conflict in the country (reflected in the homicide rate) is on the rise.

*Figure following on the next page*

Figure 10. Unemployment rate, economic development and homicides per 100 thousand inhabitants in Brazil: 2000 - 2015



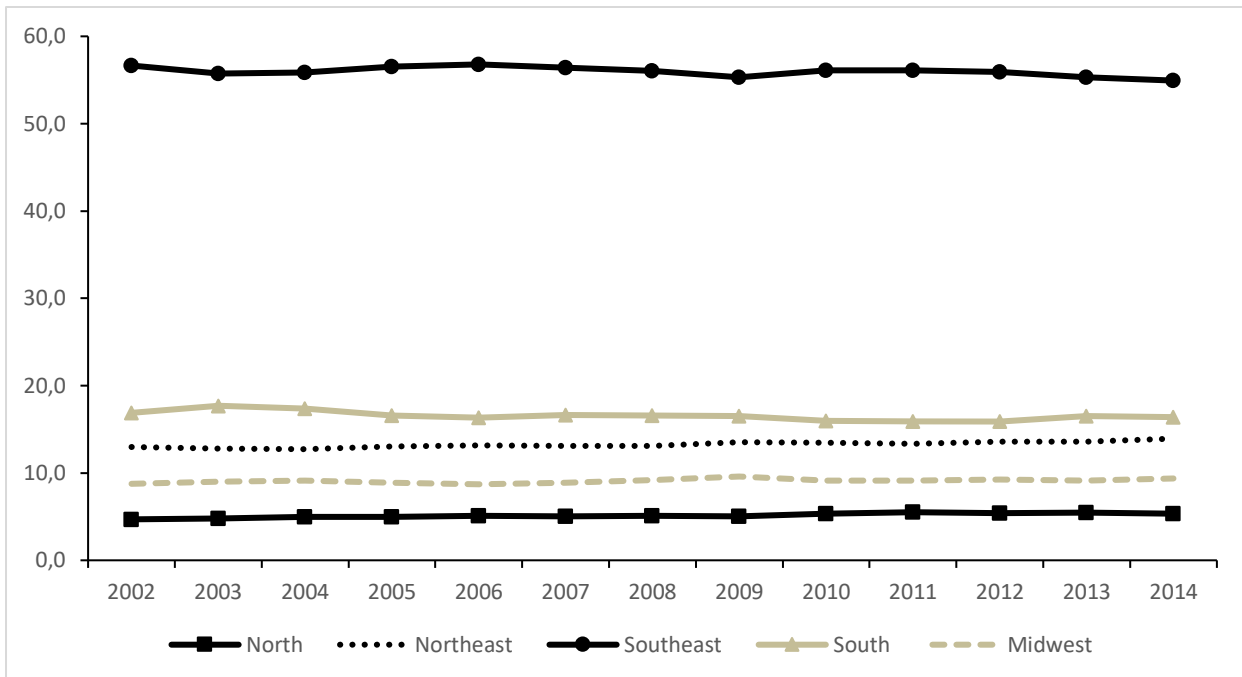
Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (IPEA, 2017; Cerqueira, et al., 2016)

But is this paradox really true? Does the macro data fully reflect the internal conflicts of the country? As we have seen before, the concentration of wealth in the country is quite unequal. In this way, macroeconomic data may show a veil that is not necessarily representing the poorest areas of the country. To demonstrate this, we will proceed to better explain the type of conflicts that are in the country. The typology of social conflicts in Brazil is oriented towards conflicts related to agricultural issues, which have historically been a problem for governments on duty. This is mainly due to the way in which this type of movements are manifested as they usually do so with a high degree of violence (PNUD y Fundación UNIR, 2011). Agrarian conflicts may have been triggered by two rural characteristics (Velez, De Barros, & Ferreira, 2004, p. 9). First, the wide gap in living conditions between rural and urban areas. According to the heterogeneity among landowners because only one-third of the available land was actually used by family owned farms, even though they housed 77% of the rural labour force. Therefore, it was the uneven conditions of life and the unequal distribution of land that provoked the agrarian conflict in Brazil. A specific case of this type of conflict was found in the "Movimiento de Trabajadores Rurales Sin Tierra", which was a peasant movement that has existed since the 1990s. This was an organized movement, with more than 500000 members for the year 2001, that invaded non cultivated lands in a violent way. In spite of this, it recognizes the importance of forming alliances with urban organizations in order to obtain public support. Because of this, they called for support of their needs through the political party "Partido Trabalhador", which has been a highly influential party during the decades of study (Kay & Salazar, 2001, pp. 169-171). However, urban areas also showed the presence of conflicting social groups, as in the case of drug traffickers found in the favelas of Rio de Janeiro. The favelas, according to Michel Misse, are poor areas found on the fringes of the megacities, which are made up of descendants of prior slaves and European immigrants who came to Brazil in search of refuge during World War II. By the end of the Vargas dictatorship in 1945, the populist parties and the Catholic Church tried to make an effort to integrate the large cities into this marginal population, which was prevented by the conservative opposition of the wealthy families of Sao Paulo. These areas presented a high level of violence and criminality (Misse, 2010, p. 21; Koonings, Veenstra, & Murillo, 2007, pp. 618-619). According to Rosalindo Silva, gangs (called "commandos") found in the favelas monopolize the use of physical force in the area as a "necessary evil" in order to maintain the illicit market in check. In addition to this, one

can find other acts of crime carried out by the same traffickers as burglaries in buses and cars and also assaults on pedestrians (Silva, 2004, pp. 155-159). According to Misse, even though not all people living in the favela are linked to organized crime, several of them are forced to hire a private security service, called "escuadrones de la muerte" (death squadrons), groups of military police that protect Favelas with the promise of killing the local delinquents, in exchange for a monthly fee. It can be seen that, due to lack of security, favela residents are forced to defend themselves with violent methods, thus increasing the rates of conflict in the area (Misse, 2010, p. 28). Only by reviewing the scope of the drug traffic, one can find several "commandos" that occupy areas of the favela, making it even more dangerous for the peaceful residents to walk through other areas that do not belong to their "commandos". Thus, as in the agrarian case, an extensive and organized network of criminals gangs can be seen here, which are in constant conflict between themselves, and even lived in greater tension with the neighbouring rich areas, which have historically marginalized the inhabitants of the favelas. (Silva, 2004, pp. 155-159). An important factor that must be mentioned was the presence of the corruption in Brazilian politics. As Helder Ferreira and Diogo Martins mention, corruption is a factor that increases and worsens social inequality in terms of income. Between 1999 and 2008, the level of corruption in Brazil has worsened, shifting its position from the list of countries with the lowest corruption from the 45th place to the 80th. It is also shown that the areas with the most corruption are the regions of the North and the Northeast, with an exception in Sao Paulo, which is located in the Southeast, but is in the seventh place on the list. (Ferreira & Martins, 2014, p. 121). Likewise, as a study by Fernando Filgueiras et. Al., showed, more than 50% of people believed that the State should be responsible for satisfying the public interest, although at the same time they are aware of the lack of impunity and laws promoted by the state to reduce corruption (Filgueiras, Montandon, Malgahaes, & Mascarenas, 2010, pp. 325-328). In this way, it creates an environment of insecurity and clear social inequalities between people who are benefited by corruption and people who are negatively affected by the lack of a legitimate and reliable State, thus promoting social conflict. One can begin to see, then, a relationship between the level of internal development and the level of conflict in Brazil. This is precisely the explanation for the paradox raised in this paper. As explained by Koonings et. Al., Brazil suffers from the serious error of concentrating the presence of the State and both private and public expenses in "Megacities", such as Sao Paulo. This creates a sense of deprivation and exclusion both in the marginal areas of the city (such as favelas) and in other regions of the country (such as the northern region of Brazil). In this way, the lack of presence of the State in these zones generates violence, organized crime and territorial bands due to both a reaction to the lack of the authorities as well as an alternative of a violent social order. (Koonings, Veenstra, & Murillo, 2007, pp. 616-617). For this reason, macroeconomic variables can prove to be misleading to the reader, as it does not show how well resources have been distributed around all regions of Brazil, nor how the conflict between regions is distributed. The following figures show the differences between the GDP share by regions of Brazil during the years 2002 and 2014 and the rate of homicides per one hundred thousand people between regions during the period 2004 and 2014. It can be clearly seen that the share of the Southwest GDP is much higher than that of the other regions and that at the same time, the rate of homicide has been reduced in recent years. Meanwhile, the other regions whose GDP share are very low, show an increasing rate of homicides during these years, being dramatically clearer in the Northeast. From this, it can be noted that there is to some extent a negative correlation between the GDP's share of the regions and their homicide rate: the poorer region, the higher the homicide rate.

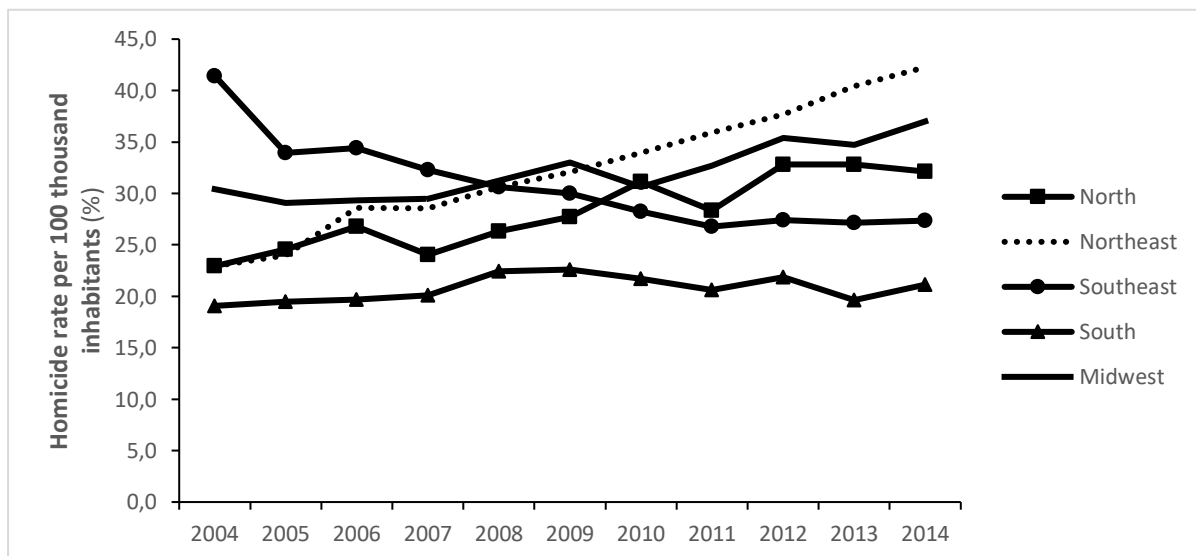


Figure 11. GDP share by regions, Brazil: 2000 - 2015 (%)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (IPEA, 2017)

Figure 12. Homicide rate per 100 thousand inhabitants, Brazil: 2004 - 2014 (%)



Source: Compiled by Centro de Investigación de la Universidad del Pacífico based on (Cerqueira, et al., 2016)

## 5. CONCLUSION

During the period 2000-2015, three stages can be distinguished. The first is the stagnation period, which lasted from 1997 to 2003 and was mainly characterized by different global crises. The next was the economic boom period, which lasted from 2003 to 2011 and it was characterized by an improvement in different economic indicators such as GDP, international terms of trade and so on. Finally, the downturn period lasted from 2012 to 2015 and it was characterized by the fall in the commodity prices, the rise in oil prices and the reduction of the Consumers Confidence Index. In general terms, Brazil showed a good economic growth. It was regarded during the decade of the 2000's as one of the new global powers, joined the BRICS

countries and it quickly regained economic development after the 2008 crisis. About indicators of poverty and inequality, it can be seen that during 2001 and 2014, both rates of poverty and extreme poverty reduced from 20% and 9.7% to 15.1% and 5.5%, respectively. In addition, the average annual real wage rate has been rising steadily since 2000 and the Gini index decreased from 0.601 in the year 2000 to 0.5148 by the year 2014. However, the level of conflict registered during 2009 and 2010 placed it as a country with medium-level social conflict. This created a paradox in the data: Brazil has had good economic development, it reduced its poverty rate and kept their minimum wages on the rise. Nevertheless, all of these effects did not seem to reduce Brazil's incidence of social conflicts (measured as rates of homicide per 100 thousand people). In conclusion, it may be noted that the paradox does not really exist. What has led one to think that it exists lies in the abundant use of national data, rather than carefully analysing the different realities within the regions of the country. At this level of study, one can clearly notice the expected logical relationship: great poverty (reflected in the share of GDP), more violence. Likewise, it has been possible to differentiate some possible sources of social conflict in agrarian, urban and even political areas. This shows a clash in the society on the part of the richest groups with the poorest ones and that the Brazilian population lives in a clear state of political mistrust due to the corruption.

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## ECOLOGICAL AWARENESS AS THE BASIS OF COMPETITIVE ECONOMY THROUGH THE PRISM OF CRIMINAL OFFENSES AGAINST ENVIRONMENT

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### ABSTRACT

*The anthropocentric intellection toward the environment, which has existed for almost two centuries, has led to a series of ecological problems on local, regional and global scale. By the 1960s ecological consciousness has been completely suppressed by the dominant anthropocentrism, which places the focus of its essence on human. The visible and "tangible" consequences of anthropogenic pressure on the environment resulted with the introduction of a modern approach to environmental protection. The culmination of the ecological crisis, at the end of the 20th century, has encouraged the development of ecological consciousness. The importance of sustainable development in the correlation with environmental protection, in terms of criminal justice repercussion, is increasingly reflected on the awareness of the necessity of emphasizing the ecocentric concept of environmental protection that focuses on a "natural environment" rather than "maintaining human living conditions". Insufficiently developed ecological awareness, in terms of unrecognition and unresponsiveness to the realization of the criminal offense in field of environmental pollution, is still present in the 21st century, and was reflected in the "Pliva case" situation where the "welfare" of the chemical industry expansion gained primacy over environmental protection from pollution. The aim of this paper is to point out the importance of ecological consciousness as a part of social consciousness, in the absence of which the criminal law regulation remains only a black letter on paper, as seen in the Pliva case. Also, it leads us to the conclusion that unreported environmental crimes contribute its relatively small and negligible share in the overall criminal structure.*

**Keywords:** *anthropocentric conception of environmental protection, criminal offense of environmental pollution, ecocentric concepts of environmental protection, ecological awareness, environmental protection, sustainable development, Pliva case*

### 1. INTRODUCTION

Until recently, no special attention was paid towards environmental protection, mainly because dominantly anthropocentric intellection towards the environment existed for a long time in the combination with the belief that natural resources are inexhaustible. In the term of realisation the characteristics of the criminal acts against the environment, certain behaviors have been recognized as such one only recently. In the croatian Criminal Law from the 1997<sup>1</sup>, criminal offenses against the environment, for the first time, were classified into the separate head of the Criminal Code, modeled by comparative legislation.<sup>2</sup> Until then, the majority of the environment protection incrimination was dislocated through various heads of a special part of the criminal law. By adopting the new Criminal Code in 2013,<sup>3</sup> the biggest changes in a special section have been made in Chapter XX "Criminal Offenses Against the Environment" where seven new criminal offenses were introduced.<sup>4</sup>

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<sup>1</sup> Criminal Law, Official Gazette 110/1997

<sup>2</sup> According to model of the German or Austrian criminal law (Straftaten gegen die Umwelt).

<sup>3</sup> Criminal Law, Official Gazette, 125/11, 144/12, 56/15, 61/15

<sup>4</sup> Release of pollutants from the vessel (Article 194); Endangering the ozone layer (Article 195); Destruction of protected natural values (Art. 200); Destruction of habitats (Article 201); Trading in Protected Natural Values



Given the specific object of protection, in criminal acts against the environment, the fundamental features of criminal law are particularly pronounced.<sup>5</sup> When it comes to criminal offenses against the environment, object protection is primarily in the domain of administrative, civil and other branches of law, beyond the criminal law, where the protection is realized by non repressive instruments. Criminal law comes only subsidiary, as „ultima ratio“ in the fragment of the most significant social values of environmental protection, protection that couldn't be provided or accomplished in any other way. The meanings of key concepts of environmental crime are determined by a number of special regulations in the field of environmental protection. In this way, criminal law provides a complete conceptual approach to environmental protection, preservation of the natural community and ecological stability.<sup>6</sup>

## **2. CONSTITUTIONAL FOUNDATIONS OF ENVIRONMENTAL PROTECTION**

The preservation of nature and the human environment represents the highest value of the constitutional order of the Republic of Croatia and is basis for the Constitution interpretation. In Art. 3. Constitution of the Republic of Croatia,<sup>7</sup> among the highest values of a legal order protected by the Constitution, the preservation of nature and the human environment is also mentioned. In the pursuit of economic, social and cultural rights of an individual, entrepreneurial freedom and property rights may be exceptionally limited by law in order to protect the interests and safety of the Republic of Croatia, nature, human environment and human health (Art. 50, al.2). Also, the Constitution of the Republic of Croatia proclaims that the sea, the seaside and the islands, water, air space (...), land, forests, plant and animal world (...), when it is determined by the law, are the goods of great interest to the Republic of Croatia and have its special protection (Art.52 al.1). The right to a healthy life was elevated to constitutional proclamation, and the insurance of it lies precisely on the state (Art. 70, al. 1 and al. 2).

## **3. OTHER IMPORTANT DOCUMENTS IN THE FIELD OF ENVIRONMENTAL PROTECTION**

Program guidelines and basic environmental protection principles in the Republic of Croatia are contained in the important political document "Declaration on Environmental Protection in the Republic of Croatia" of June 17 1992. Based on Art. Article 11, paragraph 2 of the Nature Protection Act,<sup>8</sup> the Croatian Parliament, at its session of July 7, 2017, has adopted the Strategy and Action Plan for Nature Protection of the Republic of Croatia<sup>9</sup> for the period from 2017 to 2025, which is a fundamental document of nature protection in the Republic of Croatia. As well as in the world, in the Republic of Croatia, nature is under constant pressure of human activities. Although significant efforts are being made to preserve nature, some of its constituents are still endangered. Strategic planning aims to focus the available capacities on activities that will contribute to the conservation of nature to the most significant extent.

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(Article 202); Illegal introduction into the environment of wild taxa or GMOs (Article 203); Changing the Water Regime (Art.210.)

<sup>5</sup> Criminal law special features are reflected through the subsidiary protection instrument, fragmentation and accessory criminal law protection.

<sup>6</sup> Posebni dio kaznenog zakona, Cvitanović, L., p. 270.

<sup>7</sup> Constitution of the Republic of Croatia, Official Gazette, 56/90, 135/97, 8/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14

<sup>8</sup> Nature Protection Act, Official Gazette 80/13

<sup>9</sup> Strategy and Action Plan for Nature Protection of the Republic of Croatia, Official Gazette 72/2017

Also, numerous international legal sources have been adopted under the auspices of the regional organizations of the European Union, the Council of Europe and the United Nations, the content of which is legally binding and relevant to domestic criminal legislation of the Republic of Croatia.<sup>10</sup>

#### **4. THE STRUCTURE OF CRIMINAL OFFENSES AGAINST THE ENVIRONMENT AND THEIR REPRESENTATION IN THE TOTAL SHARE OF CRIMINAL OFFENSES**

In the overall crime rate for 2016, on an annual level, environmental crime accounts for only insignificant percentage of 0.68%.<sup>11</sup> In the totality of environmental crimes, the illegal hunting and fishing (30) and the killing and torture of animals (26) were predominated. The share of other criminal offenses against the environment was sporadic.<sup>12</sup> By comparing the available statistical data over the observed periods (2013, 2014 and 2015), ostensibly or not, there is an impression of rare representation of criminal offenses against the environment and the declining trend in the structure of total convictions for individual criminal offenses.<sup>13</sup> Such data could led us to the conclusion that it is a minor criminal-political category of criminal offenses, but we must be aware of the fact that the absence of "real victim", in this category of criminal offenses, in the public perception can result in a relatively low level of social sensitivity on the actual danger of these criminal offenses, and thus the absence of the criminal charges and prosecutions of the perpetrators. Some authors conclude that it is to be assumed that the „dark number“ of environmental crime is considerably higher, but the height of the same remains to be speculated. Given the seldom prosecution of perpetrators of environmental crime, the Ministry of Environmental Protection and Energy in January 2017 presented the project "Strengthening the role of the Croatian Environment and Nature Agency (HAOP) in informing and raising public awareness in the field of environmental protection, climate change and nature protection; "with a goal of public awareness and education in the field of environmental protection, climate change, nature conservation and sustainable development.<sup>14</sup> Implicitly, we can talk about raising the level of awareness of the danger of criminal acts against the environment and the necessity of undertaking actions that will result in the punishment of their perpetrators.

##### **4.1 Share of Criminal Offenses against the Environment in the Total Crime Structure in the Republic of Croatia**

*Table following on the next page*

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<sup>10</sup> Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment; Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law; Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification).

<sup>11</sup> The total number of adult perpetrators convicted for environmental crimes was 143, compared to 14,888 adult persons convicted in the year 2016; 1605 Legally aged perpetrators of criminal offenses, Criminal charges, Accusation and Convictions in 2016, Zagreb 2017, p. 134.

<sup>12</sup> For example, for the Environmental Pollution criminal offense in 2016, two adult persons were charged and only one was convicted. Four adult persons were charged for criminal offense of Endangering the Environment with Waste, and only three adult persons were convicted.

<sup>13</sup> For the period of 2014, in the overall criminal structure on an annual level, 0,96% of the total number of convictions of adult perpetrators fell to criminal offenses against the environment. In 2015, this number was reduced to 0.84%, and in the year 2016 it was 0.68% in the total structure of convicted perpetrators.

<sup>14</sup> Retrieved 13.09.2017 from <http://www.dzpp.hr/>

*Table 1. Overview of Criminal Offenses against the Environment in the Total Structure of Criminal charges, Accusations and Convictions of legally aged perpetrators in the period time from 2013 to 2016*

		2013	2014	2015	2016
<b>TOTAL</b>	<i>Criminal charges</i>	55.924	51.136	57.688	60.194
	<i>Accusations</i>	22.397	18.089	15.198	15.889
	<i>Convictions</i>	16.617	14.888	12.552	13.412
<b>CRIMINAL OFFENSES AGAINST THE ENVIRONMENT</b>	Criminal charges	475	383	316	340
	Accusations	386	216	147	120
	Convictions	174	143	106	91

*Source: data base of the Central Bureau of Statistics of the Republic of Croatia; Aged perpetrators of criminal offences; Criminal charges, Accusations and Convictions for the period time from 2013 to 2016*

*Table 2. Total percentage of Criminal Offenses Against the Environment in the Total Structure of Criminal charges, Accusations and Convictions of legally aged perpetrators in the period time from 2013 to 2016*

		2013	2014	2015	2016
<b>PERCENTAGE SHARE OF CRIMINAL OFFENSES AGAINST THE ENVIRONMENT IN THE TOTAL STRUCTURE OF CRIMINAL OFFENSES</b>	Criminal charges	0,85%	0,75%	0,55%	0,56%
	Accusations	1,71%	1,19%	0,97%	0,75%
	Convictions	1,05%	0,96%	0,84%	0,68%

*Source: data base of the Central Bureau of Statistics of the Republic of Croatia; Aged perpetrators of criminal offences; Criminal charges, Accusations and Convictions for the period time from 2013 to 2016*

Observed through the analyzed periods, there is a clear dynamics of the downward trend of criminal offenses against the environment in the total share of Criminal charges, Accusations and Convictions of legally aged perpetrators of criminal offenses. With an insensibly statistical increase in 2016 related to reported perpetrators, this figure is negligible compared to a significant reduction in the total number of convicted persons in 2016 compared to the earlier observed periods.

## 5. PLIVA CASE-PRACTICAL EXAMPLE

Pliva's presence on Republic of Croatia's territory has been recorded for more than four decades. It is the largest pharmaceutical company in Croatia and one of the leaders in the South East Europe region.<sup>15</sup> Apart from being one of the largest economic entities in Croatia, Pliva is one

<sup>15</sup> Retrieved 13.09.2017 from <http://www.pliva.hr/pliva/podaci-o-kompaniji>

of the leading exporters as well.<sup>16</sup> With 22 percent of the total pharmaceutical market share, Pliva is the leading company on the Croatian pharmaceutical market.<sup>17</sup> Pliva's product portfolio includes a large number of finished forms of drugs and active pharmaceutical substance, and is focused on the development of generics and drugs with limited market competition. Since December 2008, Pliva is a member of Teva Group, one of the largest pharmaceutical companies in the world. In relatively recent practical example, under the NATO project "Science for Peace", a study paper has been published by the Norwegian Institute for Water Testing (NIVA) and the Ruđer Bošković Institute (IRB), that have alerted to antibiotic pollution of Sava River that have been downstream released from the manufacturing plants of the pharmaceutical industry.<sup>18</sup> As a base, the IRB measurements of the chemical pollution level in Sava waters in 2006, 2007 and 2008 were used, and they have testified the industrial pollution.<sup>19</sup> On August 25, 2007, the Ministry of Agriculture filed a criminal charges against Pliva (and the company Kvasac) due to heavy pollution of the Gorjak stream, with a provisional measure prohibiting production. However, after a few months of pause, the production facility was restarted. In September 2010, IRB issued a report in which stands that, as a result of thirty years of wastewater discharge, the Gorjak stream at S. Marofa, located four kilometers downstream /downhill from industrial production facilities, was affected by the deposit of chemicals, antibiotics and other heavily biodegradable metals. Analysis of Gorjak stream sludge in 2008 and 2011 have shown that sludge is contaminated with substances that have a long period of degradation such as antibiotics, artificial hormones and heavy metals. Although document didn't explicitly mentioned Pliva, implicitly it was inferred that it was precisely about the Pliva factory or, as it was stated, "the important influence of production facilities, located several kilometers upstream of Zagreb". The type of antibiotic found in the Sava river also referred to the Piva.<sup>20</sup> In its production process, for many years, untreated technological waters were discharged into the nearby Gorjak stream. In 2010, Croatian Waters launched the Request for the Reparation of the Gorjak Stream Damage, what damage had to be remedied by the pharmaceutical industry which led to the pollution. Most of the pollution had occurred over than ten years ago, when the environmental protection standards were considerably lower than today. After the research, in which the Ruđer Bošković Institute participated, Croatian Waters in 2010 ordered the companies<sup>21</sup> to fund stream reparation. However, for the unknown reason, Croatian Waters didn't persist on the implementation of the Gorjaka Stream Pollution Reparation Claims, nor has it been repaired or adequate cleaners have been built.<sup>22</sup> The year

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<sup>16</sup> More than 80% of Pliva's products are exported, with the USA, Russia and EU countries as the largest markets.

<sup>17</sup> Sustainable Development Report 2011, Pliva; Business results, p. 10.

<sup>18</sup> The main problem lain in the fact that long-term exposure of microorganism to antibiotics can result in their resistance, by creating so-called antibiotic resistant "super bacteria". Ultimately, people exposure to such "superbacterias" would pose a great danger to public health with "irreversible effect".

<sup>19</sup> The same thesis was mentioned in the academic article "Occurrence and Fate of Emerging Wastewater Contaminants in the Western Balkans Region" published in 2008, in which macrolide pollution is explicitly associated with the "pharmaceutical industry of Pliva near Zagreb".

<sup>20</sup> A concentration of three macrolide antibiotics was found, which bounced from other antibiotic levels; Erythromycin, azahomoerythromycin and azithromycin (the last mention is also an active ingredient of Plivia Antibiotic Sumamed). It has also been observed that during the observed periods, the level of all three macrolides simultaneously grew and decreased, suggesting that they originated from the same source. Concentration of none of the three mentioned antibiotics was not recorded in the far-off streams, eg. at the border with Slovenia, and up to 12 measurements were performed.

<sup>21</sup> Two companies were involved; Pliva Company and Kvasac Company. Kvasac Company was a part of Pliva Company, at the time when the most of the pollution occurred. After the separation in August 2009 Pliva and Kvasac separated the system of drainage of technological water.

<sup>22</sup> APO Company was in charge for the reparation, and it subleased the Ruđer Bošković Institute (IRB). The IRB cited in its report that it was necessary to investigate whether antibiotic-resistant bacteria have developed in the stream and whether there was any contact between the Gorjak and the Šibice waterworks. Croatian Waters have ignored the aforementioned, so researches have never been carried out.

2011 for Pliva was fruitful by the number of winning awards and recognition.<sup>23</sup> Also, in 2011 Pliva announced the construction of a new production plant, so-called The SM2 Synthesis Project.<sup>24</sup> Deputy Prime Minister at that time,<sup>25</sup> called The SM2 Synthesis Project "the largest greenfield investment in 2011" and as such enjoyed the priority. The purpose of the new production plant was to increase the production capacity of active pharmaceutical ingredients of existing plants. However, the analysis of the existing plants, in the process of obtaining the integrated environmental protection conditions, has identified mismatches regarding processing procedure and emissions of pollutants from process gases and wastewaters. For that reason the Elaborate on the method of harmonization of the existing plant had to be made.<sup>26</sup> The construction of the new SM2 multifunctional synthesis plant, wastewater and process gas treatment plants was integrated in the Environmental Impact Study. By reconstructing its production facilities at the Savski Marof, Pliva planned to build its own wastewater treatment plant, process gases treatment plant and then expand production capacity. Over the next few years, the plan was to build new production facilities for the production of active pharmaceuticals at the Savska Marof location, an investment in environmental protection worth more than 100 mil. kuna. As stated in the Sustainable Development Report from 2011, Pliva has pledged to repair the pollution in Gorjak Stream at the Savski Marof, whose reparation is in interest to the local community and Pliva as well. The priority of Pliva's new construction project can be seen in quickly obtaining approvals and alignment with the Spatial Plan. In June 2011, a public debate on the Environmental Impact Study of the new Pliva production plant was launched.<sup>27</sup> Although Pliva was located in the third zone of the water protection area, where new chemical and pharmaceutical plants are banned, and existing remediation is only possible in case of problems with existing plants, the expansion of the Pliva industrial plants was permitted by introducing the famous Article 40<sup>28</sup> into the new Ordinance on Conditions for

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The Ministry of the Environment, Physical Planning and Construction with its Resolution of June 17, 2010 ordered the Croatian Waters "urgently and undelayed" to carry out the reparation of Gorjak stream, and the Croatian Ministry of Regional Development, Forestry and Water Management has ordered the Croatian Waterways to carry out the same reparation in its Resolution from March 07, 2011. Despite the above mentioned final decisions of the competent ministries, the reason why Croatian Waters haven't started and carried out the reparation remain in question. Moreover, such act of Croatian Waters is even more surprising as Pliva agreed in writing with the Croatian Waters in February 2011 for reparation plan and committed itself to do co-financing.

<sup>23</sup> In April 2011., Pliva received the Ronald Brown Award for a Special Contribution to the Development of Economic Cooperation between the Republic of Croatia and the United States, as the largest exporter in the United States; In the Pian Killer Category Pliva won Trusted Brands Award 2011; In mid-July 2011, Pliva became the winner of the Superbrands Macedonia 2011/12 award, thus confirming its leading position on the market of the Republic of Macedonia; Acknowledgment for Participation in the Project „The Key Difference“ for encouraging diversity in the Croatian Labor Market; In 2011, Pliva received a special jury price at the Golden Index for Promoting Enterprises and Institutions that are engaged in student life and in their activities, support the activities of associations or participate in some of their projects; Golden Prize Web: Strategies: in the category of Web Marketing Campaign 2011; Maxflu online campaign was declared the best in 2011.

<sup>24</sup> The project involved the construction of a Wastewater Treatment Plant (MBR), Process Gases Treatment Plant (RTO) and a new Multipurpose Synthesis SM2 Plant.

<sup>25</sup> Deputy Prime Minister was Domagoj Milošević ( December 29, 2010 to December 23, 2011).

<sup>26</sup> The Analysis of the State of the Existing Plant and the Elaborate Method of Harmonization was authorized by APO d.o.o.

<sup>27</sup> Just at the time when the Ordinance on the Establishment of the Sanitary Protection Zone in 2002 was no longer valid.

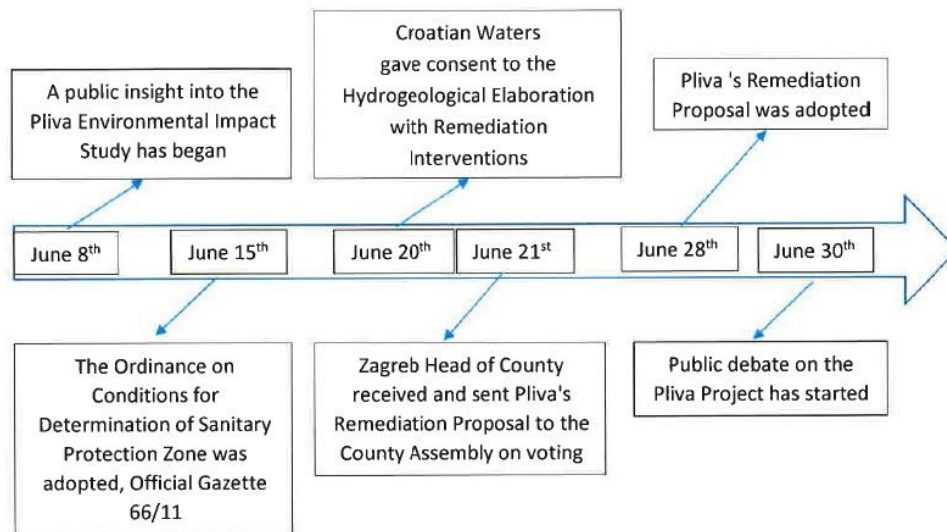
<sup>28</sup> The ecological associations have a picturesque name for Article 40, known as „Pliva's article“.

Article 40.; Existing structures and existing activities in the area of sanitary protection

(1) If there are, in the sanitary protection zone, buildings constructed in accordance with the regulations on spatial planning and construction, and whose construction is forbidden by this Ordinance or if in the area of sanitary protection there are buildings constructed contrary to the regulations on spatial planning and construction and whose construction is prohibited by these Ordinance or, if in the sanitary protection zone is performing an activity whose performance is prohibited by this Ordinance, a unit of local self-government or a regional self-government

Determination of Sanitary Protection Zone.<sup>29</sup> Article 40 actually permits the expansion of industrial plants if this improves the existing situation, which certainly went in favor to Pliva, because the refineries had to be built anyway, but a new Article had permitted the construction of new plants as well. The above mentioned modifications to the Ordinance were carried out during the public hearing on the Environmental Impact Study, by which the constructing of the chemical industry in the third protected area of sanitary watercourse was allowed. Pliva's Environmental Impact Study was ultimately assessed positively by the Ministry of Environmental Protection, Physical Planning and Construction.<sup>30</sup> The interesting part is dynamic intensity of this project development and the hurriedly state bodies acting, completely uncharacteristical to the Croatian bureaucracy. The legal course of this project procedure is shown in the following table.

Table 3. Legal path of Pliva Project Realization, 2011



Source: table was made by author using available information

As seen from the table above, the legal path of "realization" Pliva's Remediation Proposal, from public insight into the study until the adoption at County Assembly, lasted only 20 days.

unit, to which the decision on the protection of sources is related, shall, by a special act, determine the state of the influence of these structures or activities on the source.

(2) For the purposes of reconciliation of the existence of a building or performing the activities referred to in paragraph 1 of this Article, the units of local self-government or the regional self-government unit, to which the source protection decision is related, shall order the elaboration of the necessary remediation procedures and measures.

(3) Remedial actions and measures may also relate to new planned interventions in the area, for the purpose of expanding and/or developing the existing activity whose implementation ensures good water status, or improves the existing water and water environment.

The necessary remedial measures are carried out at the ultimate expense of the owner or other possessor of the existing building or the person performing the forbidden activity.

(4) If the remedial measures are to be taken without effect, the units of local self-government or the regional self-government units, to which the source protection decision applies to, shall require the removal of constructions built contrary to the regulations on physical planning and construction or notify the person who carries out the existing activity that those activities are prohibited.

(5) The obligations under paragraphs 1 to 4 of this Article are an integral part of the Decision on the Protection of Sources as well as the sources of funding for the fulfillment of these obligations.

<sup>29</sup> Ordinance on Conditions for Determination of Sanitary Protection Zone, Official Gazette, 66/11 and 47/13.

<sup>30</sup> The Ministry of Environmental Protection, Physical Planning and Construction today is separated into two separate ministries; The Ministry of Environmental Protection and Energy and the Ministry of Construction and Physical Planning.

The Ordinance on the Conditions for Determination of Sanitary Protection Zone was adopted on June 15, 2011, and was used as a template for the Hydrogeological Elaboration with Remediation Intervention, written on 67 pages.<sup>31</sup> Croatian Waters gave its consent to the Hydrogeological Elaboration with Remediation Intervention on June 20, 2011. It seems that Geo info and Ekonerg managed to get a (just issued) Ordinance, compile a relatively extensive elaboration, send it through the delivery service to the Croatian Waters, Croatian Waters managed to expertly studied the Hydrogeological Elaboration with Remediation Intervention and finally approved it. All that in just two business days. On the next day, on June 21, 2011 the Zagreb Head of County had received and sent to the County Assembly on adoption Pliva's Remediation proposal, within the framework of the study for the construction of a new plant. The County Assembly adopted the Proposal on June 28, 2011, after only three business days.<sup>32</sup> The public debate on the Pliva project started on June 30, 2011.<sup>33</sup> The aforementioned dynamics of Pliva's project development opened up a series of objections and questions that remained unanswered. The City Council of the City of Zaprešić sent a warning to Pliva for designing a pre-treatment purifier, which were designed without chlorine and sulfate purification, contrary to the Ordinance. By the Ordinance it is specifically prohibited to discharge more burdened water into the public drainage system than the Ordinance prescribes. One of the objections was referred to the dangerous substances stored upstream from the waterworks, since in this area, explicitly by law, was prohibited the storage of waste materials. Pliva's corporate leadership did not refer to none of comments made, instead it came out only with a brief statement for the public, which referred to the general description of the job and the project.

## 6. CONCLUSION

Until the social consciousness about the harm of environmental crimes develops, even in the situations where there is no "concrete victim" and the primary interests of natural environment preservation aren't put before the "benefits" that society brings (potential) polluters, very little will change in the structure of representation of criminal offenses against the environment in the overall crime, which creates the impression that such acts are relatively rare in practice. Raising awareness of the importance of nature conservation and environmental protection is certainly an essence into realization of tendency to a greater number of Criminal charges, Accusations and ultimately Convictions of perpetrators of environmental crimes. The core of the problem is ecological ignorance and unrecognition of criminal offense realization, which, in the absence of a real victim, implies the "unnecessary" processing of the real perpetrators. Favoring the benefits, offered by "potential polluters" in terms of job creation, indirect employment in service and logistics and increasing water and communal contributions at the expense of real potential threats for thousands of people, leads us to apparent relativization of a deep problem. As long as the interests of citizens aren't put in front of the apparent benefits of the minority, in correlation with ignorance and lack of environment care, we can't talk about the adequately achieved level of ecological awareness that should be a prerequisite for a competitive economy of modern society. Lack of control and sanctions favors the individuals, but it "brakes on the back" of the environmental protection institute, felt by majority. The non-controversial fact of Pliva status as the leading pharmaceutical leader is not a exculpation for the minorization of the burning problem in the Gorjak stream. The remediation is the obligation of the pollutant and evidently, in Pliva case, it existed long before the reparation came through the prism of the construction of a new production plant, within which wastewater treatment

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<sup>31</sup> Study for Pliva and Kvasac was made by Geo info and Ekonerg company.

<sup>32</sup> June 22, 2011 was the Day of Anti-Fascist Fight (fell on Wednesday, 2011), and on June 25, 2011, was the Statehood Day (fell on Saturday 2011).

<sup>33</sup> Retrieved 13.09.2017 <http://www.forum.tm/clanak/nato-ov-dokument-razotkrio-sava-puna-plivinih-antibiotika-367>

plants (membrane bioreactors) were built. The purpose of the Criminal Code is to protect the highest social values, which would be, in the absence of criminal incrimination and repression, unprotected. By discharging wastewaters in the Gorjak stream, the concentration of antibiotics in the Gorjak stream have been increased which indisputably led to the endangerment of water quality. Also, increased concentration of antibiotics in the water could lead to development of antibiotic-resistant bacteria, resulting in real endangering for animal and plant world and humans life or health. By doing so, all elements of criminal offence of environmental pollution have been realized. Pliva case is a classic situation in which a perpetrator is recognized, but not sanctioned. It speaks in favor why statistically criminal acts against the environment have a rare share in total committed crime. The prerequisite for responsible environmental behavior lies in the balance between social development and environmental protection through the prism of the individual's educational process and instrumentation of environmental rights protection system. The protection of the most significant social environmental values, in the form of endangerment or injury, occurs in the form of criminal justice instrumentation. The balance between the human needs and the environment protection is achieved through the prism of the ecocentric concept of environmental protection. The premise of establishing an equilibrium with the ecosystem lies in "establishing balance within ourselves, between what we are and what we are doing".<sup>34</sup>

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# **IMPLEMENTATION OF THE GREEN ADVERTISING MEDIA (GAM) TO INCREASE PRODUCT SALES VOLUME (PSV) IN MALAYSIA PRODUCT MARKET**

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## **ABSTRACT**

*This paper review the implementation of green advertising media (GAM) in Malaysia product market and how to enhance the product sale volume (PSV). The main objective is to identify the relationship between GAM and PSV. From the result, it show GAM have significant value towards PSV and show digital interactive media (DM) was dominants to increase sales volume compare to print media (PM).*

**Keywords:** *Green Advertising, Product sale volume, Advertising media, Digital Advertising*

## **1. INTRODUCTION**

Advertising media is a vehicles that have been used to place advertising which enable the product or service to be known by consumer. In business, to market particular product or service, the effective strategy is by promotion and advertising. Advertising is a multibillion dollar business that touches almost every corner of this vast and diverse expanse (William et al., 2007). He also mention, whether watching television in Thailand, using a hand phone in Japan, travelling on Australian highways, listening to Malaysia radio or watching Bollywood movie, one cannot help but notice the advertisements which have become part of the mass media. Furthermore, it is due to daily lifestyle of consumers. Every day they see the advertisement around their place and get the information regarding to the ads display. However, the advertising in different forms like printed media, electronic media, digital media and also the home media have their own benefits and drawbacks. The word green in this study means reducing the design cost, increasing the quality of advertisement, reducing the waste and increasing the duration of advertising receive by consumer.

## **2. PROBLEM STATEMENT**

Nowadays, competition among firms has grown stiffer as every company seeks to achieve their main corporate goal and to enhance performance which can be translated through achieving greater sales and profit. As a result, the majority of the companies in the current society are turning to advertising in an effort to boost their profits. In Malaysia, most of the companies are spending money in advertising their company products or services brand and expect that consumers or those who read the advertisement will react positively towards their products or services brand hence increase the product sales volume. In addition, newspaper and terrestrial television advertising take up 56% and 33% of the major share of advertising expenditure respectively. These are followed by radio (4%), magazines (3%), outdoor (2%), point of sales advertising (1%) and cinema (1%), newspaper advertising expenditure reached RM 3.1 billion, while TV came second at RM 1.8 billion in 2007 (World Association of Newspaper, 2008).

## **3. LITERATURE REVIEW**

According to George E. Belch et, al. (2012), advertising media can be divided into four (4) elements which are print media, electronic media, digital interactive media and out-of-home media. The print media included the magazines, newspapers, brochures and flyers.

Next, the electronic media consist of radio, television and video. Furthermore, digital interactive media are Internet advertising, email advertising and mobile advertising. In addition, bulletins, billboards, directories and packaging are in home media. According to William F. Arens et, al. (2009), there are pros and cons of magazine advertising. The pros are flexibility, color, authority and believability, performance, prestige, audience selectivity, cost efficiency, selling power, reader loyalty, extensive pass-along readership, and merchandising assistance. Newspaper also the familiar one in term of advertising. This happen because every day, people will read newspaper to get the latest news about what happen in their daily life. Television is becoming a gateway to a world of communication never before imagined (Ronald Lane et, al., 2011). Ronald (2011) mention, the fragmentation of the television audience has changed programming, financing, and the criteria of what constitutes a ‘mass’ medium.

Interactive media refers to communication systems that permit two-way communication, such as a telephone call or an e-mail message, (Arens, W. et, al. 2011). He also mention that more interactive medium and the closer it is to a dialogue, the more personal and persuasive the communication experience. Digital interactive media included internet, internet advertising, e-mail advertising and mobile advertising. According to Wells et, al. (2008), the purpose of internet advertising are providing a brand reminder message to people who are visiting Web site, works like an advertisement in traditional media and delivers an informational or persuasive message, and providing a way to entice people to visit the advertiser’s site by clicking on a banner or button on the Web site. e-mail advertising is so inexpensive media. In fact, the response rate for an unsolicited e-mail campaign is much more higher than for a banner advertisement campaign, (Wells, W et, al. 2008).

#### 4. RESEARCH QUESTION

1. How far the green advertising media will boost the product sales volume?
2. Why the green advertising media is important to increase the product sales volume?
3. What are the green advertising media need to be used in order to increase the product sales volume?

#### Green Advertising Media

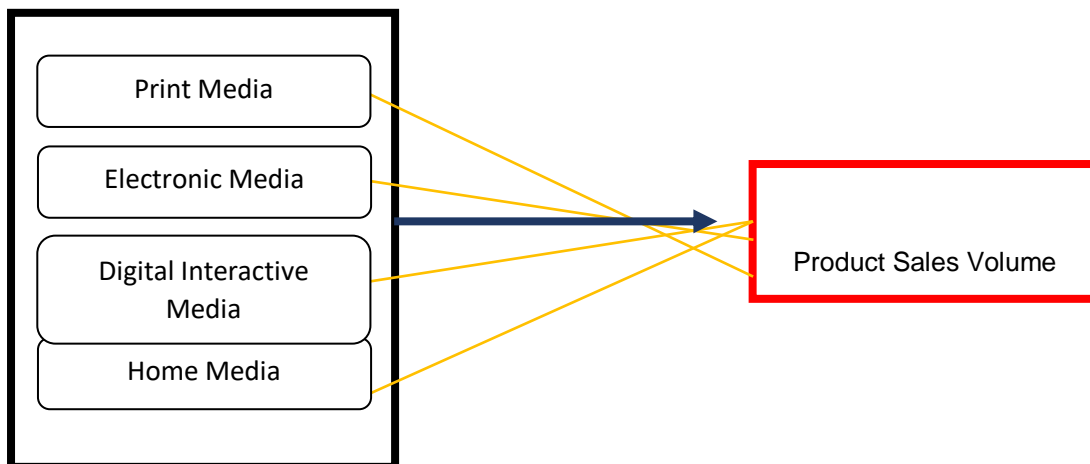


Figure 1: Theoretical Framework of Green Advertising Media and The Product Sale Volume.  
Source: George E. Belch and Michael A. Belch (2012). *Advertising and Promotion: An Integrated Marketing Communication Perspective*

## **5. RESEARCH OBJECTIVE**

This study is to identify the relationship between GAM with PSV and focus on the regular customers of company X. Respondents for this study are schools administration and teachers who's already known this company product before this. These groups are crucial in this study as they would give opinion and view on how to improve the GAM in order to increase the PSV. The theoretical framework (Figure 1) for this study is adapt and adopt from George E. Belch and Michael A. Belch (2012) Advertising and Promotion : An Integrated Marketing Communication Perspective.

Figure 1 above shows the theoretical framework constructed in this study. The independent variables consists of print media, electronic media, digital interactive media and home media. Therefore, the dependent variable is the product sales volume. This theoretical framework explains in two ways which are the first one is each of the independent variable are partially in relation with product sales volume and the second one is the green advertising media simultaneously in relation with product sales volume.

## **6. METHODOLOGICAL CHOICES**

Quantitative method been used for this study. According to Saunders et, al. (2012), quantitative research examines the relationships between variables, often incorporates controls to ensure the validity of data. In this method, a survey research strategy is normally conducted through the use of questionnaires or structured interviews or possibly structured observation. This study, researcher will collect the data using the quantitative method. This method is very familiar when doing the collection of data. The data collection actually in the accurate amount and more quicker than others. Furthermore, the data are gathered among the respondents from the teachers and schools administration.

## **7. DATA COLLECTION METHOD**

This study using the questionennaire method. The secondary data is from observation, internet, journal and discussion. The questionnaire was send by hands to the school by reserchers and collect back by a week. All the data received has been anlyze using the SPSS system version 20.0. To encourage high resonance rate, the questionnaire were kept short and mainly structured question using 5 point sclaes and coding boxes were used

## **8. LOCATION OF THE RESEARCH**

This study will be conducted at selected schools in Malaysia especially at Pahang, Melaka and Kuala Lumpur. These states have been chosen because of the limitation of time and respondents. The schools within these three states will be the main respondents in this study.

## **9. FINDINGS**

There are four (4) independent variables that have been examined to increase the product sales volume. The variables are print media (PM), electronic media (EM), digital interactive media (DM) and home media (HM). Meanwhile, the dependent variable is the product sales volume (PSV). A survey questionnaire have been distributed to 140 respondent around Melaka, Negeri Sembilan and Pahang and 100 questionnaire have been returned back to be analysed for this study. Table 1 shows the results of the correlation coefficient for independent variables and dependent variable in this study.

Table 1 : Correlation Analysis

		PM	EM	DM	HM	PSV
PM	Pearson Correlation	1	.688**	.467**	-.157	.127
	Sig. (2-tailed)		.000	.000	.119	.209
	N	100	100	100	100	100
EM	Pearson Correlation	.688**	1	.249*	-.051	.223*
	Sig. (2-tailed)	.000		.013	.613	.025
	N	100	100	100	100	100
DM	Pearson Correlation	.467**	.249*	1	-.008	.320**
	Sig. (2-tailed)	.000	.013		.935	.001
	N	100	100	100	100	100
HM	Pearson Correlation	-.157	-.051	-.008	1	.296**
	Sig. (2-tailed)	.119	.613	.935		.003
	N	100	100	100	100	100
PSV	Pearson Correlation	.127	.223*	.320**	.296**	1
	Sig. (2-tailed)	.209	.025	.001	.003	
	N	100	100	100	100	100

N:100

The coefficient value for the DM and HM had highest significant correlation value among others which are 0.320 and 0.296. The p-value for these variables are below than 0.050 except for the PM which is 0.209. There are only 23.1% of variables affected the relationship between advertising media and this means 76.9% different media other than variables used for this study influenced the respondents to get the information. Three (3) variables have significantly level in this research. They are electronic media (EM), digital interactive media (DM) and home media (HM). It means the variables can increase the product sales volume. Meanwhile, printed media (PM) has the lowest significant value. So, it cannot increase the product sales volume simutenously. The value at beta for standardized coefficient is important for researcher to know which green advertising media can increase the product sales volume. Based on the table, the positive value showed if the indepedent variables increase, that mean the dependent variable also increase and if the value showed negative, it means the dependent variable decrease. Thus, EM, DM and HM show the positive value, the PSV will increase. Meanwhile, PM show negative value, so the PSV is decrease. Table 3 shown The best GAM identified is the DM (digital interactive media) and each of the statements in DM had been analysed. From the ANOVA testing shows the four (4) independent variables has different significance results. One from the four independent variables which is PM did not have significant value, so it cannot increase the PSV. Without PM, the PSV still can be boost with the other three media that are EM, DM and HM. From the correlation and regression results, the DM shows the important media that will increase the PSV. So in this study, researcher conclude the findings of the research objectives as per below :-

1. The relationship between GAM and PSV

Based on the results, after four (4) GAM tested in this research. Only three (3) of them give positive significant value towards the PSV. It was EM, DM and HM are very significant in order to increase the sales volume. Adeyanju (1997) rightly put, "radio is a simple medium in language, simple in production and transaction in nature. It's cheaper then TV, we have local, state, nation and even private radio stations in Nigeria". Due to this fact, consumers of a product always hear more adverts. The producer uses this medium as its present in virtually all state to directly communicate.

2. The important of GAM and PSV

Advertising plays a vital role in marketing consumers purchasing decision and promotion to particular. Most consumers have the erroneous impression that promotion is synonymous with advertising and vice versa. The important of GAM on PSV are to introduce the new product, to persuade customer to buy, the creation of the demand, to develop large market and to promote the image of the firm.

3. The GAM influence the PSV

GAM as a promotional message that may appeal to the needs and desire of environmentally concerned consumers. GAM can be seen as any advertisement that may explicitly or implicitly address the relationship between a product and the biophysical environment. GAM promote product, services, ideas or organizations ability to help or reduce environmental harm.

Table 2 depict that PM had the lowest coefficient value with -0.204. This value cannot increase the PSV. According to Patrick Gillespie (2014), "The long-suffering print media industry continued its decline last year. Print circulations an advertising revenue are both down. Companies rooted in the printing press are surviving and now profiting, thanks to their others competitors; the Internet and television".

Table 2 : Printed Media is the lowest coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.845	.768		1.100	.274
PM	-.204	.164	-.173	-1.245	.216
EM	.252	.115	.274	2.187	.031
DM	.421	.129	.335	3.257	.002
HM	.335	.107	.286	3.117	.002

N:100

The dramatic decline in newspaper ads revenue since 2000 has to be one of the most significant and profound Schumpeterian gales of creative destruction in the last decade, maybe in generation (Mark, J. Perry, 2014). Some observers believe that the challenge faced by conventional media, especially newspapers, has to do with the perfect storm of the global economic crisis, dwindling readership and advertising dollars, and the inability of newspapers to monetize their online efforts (Yap, 2009). Based on the results, it shows that DM is the effective GAM to increase the PSV. The word 'green' for this media can be describe as environmental tools. Such using the Internet, advertiser may reduced the cost. Internet advertising did not use any paper and it can be real time results. Advertisers do not have to wait long for boosting their business. They can see the numbers of visitors at the site and its subscribers increase. Thus, these may help in influencing the PSV.

**10. STUDY HYPHOTHESIS**

H1: PM cannot increase the PSV. Significance value is 0.216. Based on the result, the PM has negative effect on dependent variable (PSV) where significance is at 0.216 is above than 0.05. Thus, PM is rejected.

H2: EM can increase the PSV. Significance value is 0.031. The variable of EM show the significance level is 0.031 which indicate it has significance because the value is below than 0.05. Thus, EM is accepted.

H3: DM can increase the PSV. Significance value is 0.002. Based on the result, the DM has positive effect on dependent variable (PSV) where significance is at 0.002 is below than 0.05. Thus, DM is accepted.

H4: HM can increase the PSV. Significance value is 0.002. From the coefficients table 4.20 above, the variable of HM show the significance level is 0.002 which indicate it has significance because the value is below than 0.05. Thus, HM is accepted.

H5: GAM are dominant to increase the PSV. Based on table 2, it shows that electronic media (EM), digital interactive media (DM) and home media (HM) have positive significance value towards the PSV. It's confirm these three (3) media are dominant to increase the PSV.

**11. RESPONDEN CHOOSEN MEDIA**

Table 3 depicted that respondents would choose those three media to get the information about company X product in the future. This proved that represent GAM can increase the PSV.

*Table 3 : responden choosen media*

	Frequency	Percent	Valid Percent	Cumulative Percent
PRINTED MEDIA	4	4.0	4.0	4.0
ELECTRONIC MEDIA	2	2.0	2.0	6.0
DIGITAL INTERACTIVE MEDIA	58	58.0	58.0	64.0
HOME MEDIA	36	36.0	36.0	100.0
Total	100	100.0	100.0	

N:100

**12. CONCLUSION AND RECOMMENDATION**

For future, researcher suggested company X should use the digital interactive media (DM) as the main advertising tools in order to increase the product sales volume (PSV). Why? because internet is number one medium in advertising the product or services. Instead of gaining maximum profit, company X also can enlarge its brand throughout the world. At the same time also, regular and consistent up-to-date training on product information should be given to the marketing department. So they will have the current knowledge and skills to handle the adverts and also to ensure the product information is being emphasized as to enlighten the customers need. By using the DM, it may reduced the cost of advertisement, reduced the time of information delivery, being more user friendly and providing up-to-date information to customers. These are the characteristics of GAM where it can increase the PSV. Finally,

researcher suggested to the market researcher and also to other studies should be conducted to enable others company to identify those areas where promotional activities with effective advertising is lacking. They should also regularly examine the segments of the market that have been appealing so as to hold strongly on to them and to look for ways attracting more customer instead of increasing the product sales volume (PSV).

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## ARE THE BANKS IN THEIR EXISTING FORM STILL RELEVANT?

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### **ABSTRACT**

*The objective of the article is to analyse whether European economies need the banking sectors in their existing size. Is it not the case of the banking sector losing touch with reality and creating a complicated set of instruments to transfer money and risk between financial institutions? Don't the existing financial corporations focus on creating shareholder value, while at the same time neglecting the traditional functions of the banking sector? The modern financial crises and numerous cases of embezzlement and unethical behaviour by banks have revealed that Systemically Important Financial Institutions (SIFIs) pose actual danger to the stability of banking sectors and even of entire national economies, by contributing to excessive systemic risk. Banking systems become too large to qualify for public assistance, should it be needed. At the moment it is difficult to assess whether the newly created EU institutions of the banking union are capable of providing security to customers of banks. It is paradoxical, that modern financial systems, in spite of up-to-date economic, finance management, management accounting and controlling solutions, are more than ever vulnerable to crises in the global markets. Considering the significant role played by the banking sector in the economy as a whole, it seems justified to pose an existential question – why do banks exist and who are they actually supposed to serve?*

**Keywords:** *Banking sector, Public trust institutions, Systemically Important Financial Institutions*

### **1. INTRODUCTION**

The aftermath of the two serious global financial crises: the first one, caused by subprime credits, and the second – connected with indebtedness of Eurozone countries, forces us to consider the consequences of the global expansion of the largest financial institutions. Certain earlier hypotheses, such as idealising creation of shareholder value and seeking income outside traditional banking operation, were brutally tested. It transpired that the directions of development which theoretically ought to have contributed to a success of the financial sector, actually resulted in serious economic and financial problems. The never ending losses of the world's largest banks, their rapidly diminishing equity capital and market value, the unprecedented scale of state intervention aimed at stabilising the financial markets knocked out of balance by the crises – all those phenomena showed how far the banks had diverged from their basic functions and how radical were the actions necessary to save them. A few years later we can already affirm that the dangers were forgotten very quickly indeed. No supra-national institutions, systems of supervision, no legislation and no tools of monitoring and control are capable of taking into account and foreseeing all the possible situations resulting from the scale of banks' involvement in high-risk financial instruments. It is impossible to eliminate the natural tendency of shareholders and managers to maximise their wealth. People with egotistical tendencies, who are focused on increasing their riches, will always circumvent even the most detailed of regulations, as they take decisions with their own gain in mind. The objective of this paper is to analyse whether the banks operating in the international financial markets according to the existing model are still relevant. The scope of intervention used in individual countries has provoked reflection about the economic role of the state. The unprecedented scale of the systems of assistance introduced by central banks and governments of individual countries means that the final costs of the banks' risky and wrong investment

decisions are born by the ordinary taxpayers – individuals and businesses. Thus the state and its institutions become a party interfering with market mechanisms, preventing a reduction of bank equity value and transferring risk to other participants of the economy.

## **2. THE CONCEPT OF CREATING SHAREHOLDER VALUE**

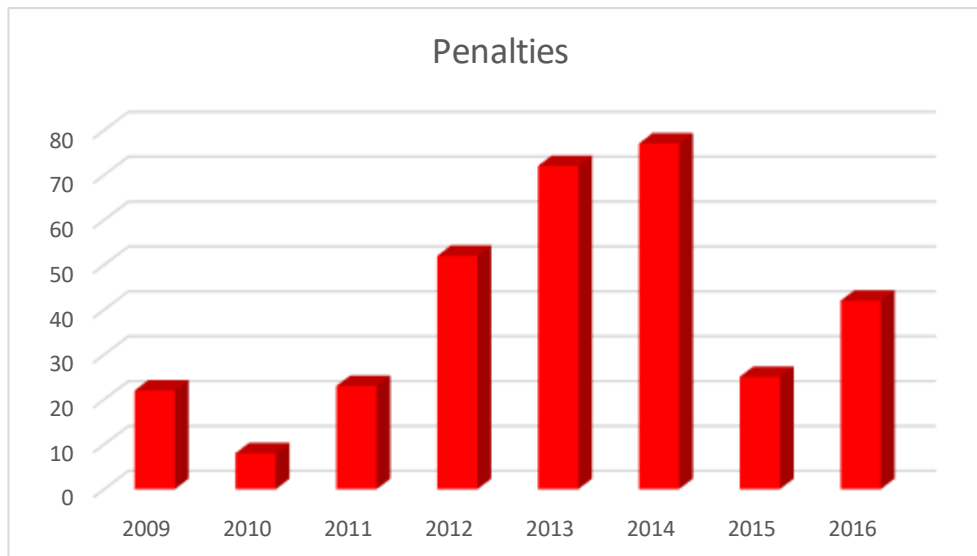
The shareholder value theory, based on the seminal works by H. Markowitz, F. Modigliani and M.H. Miller; W.F. Sharpe, J.L. Treynor, J. Lintner and J. Mossin; W.H. Meckling, P.A. Samuelson, E.F. Fama and M.C. Jensen and others was popularised by American consultancy companies. Thus created model requires economic activity to conform to generation of long-term shareholder profits. In this concept, a bank is seen as a form of investment by its owners, who expect satisfactory rates of return within a particular time-frame. Global domination of the paradigm within which shareholder value creation is the basic objective of economic activity means that it constitutes the main criterion for capital allocation by investors. Shareholder value is created when the achieved return on capital is higher than the minimal level required by the shareholders at a particular level of investment risk. T. Koller, M. Goedhart and D. Wessels emphasise that this approach ought to become the basic objective of corporate management and supervisory boards (Koller, Goedhart, Wessels, 2005, p. 4). Other authors are even more radical. A. Ehrbar goes as far as saying that "maximizing shareholder wealth is the best way – indeed, the only way to effectively serve the long-term interests of all stakeholders" (Ehrbar, 1998, p. 12). According to him, "the process of creating wealth is the same process that creates greater wealth for everyone in an economy. Indeed, increasing wealth is the only true source of social security. If companies do not pursue the maximum shareholder wealth possible, resources are squandered and the society is poorer. Paradoxically, it is only because we care about maximizing the wealth available for everyone that we should care about maximizing shareholder wealth" (Ehrbar, 1998, p. 16). Operation of modern banks is subordinated to this main objective. Their business model is based on achieving the highest possible rates of return for the shareholders. The particulars of such strategy involve meticulous construction of budgeting based on systems of motivation which connect the staff's salaries (usually calculated according to fluctuating rates) with their results. On the one hand, such solution is an instrument for directing and focussing the activity of all employees on the preferred objective, and it facilitates identifying the achievements of individual centres of responsibility and employees. In most cases, in modern banks the targets (profitability, increased volume of banking products etc.) are arranged into a sort of pyramid. The highest real-term targets are assigned to individuals employed at the lowest levels of the bank's structure – e.g. customer service staff, while the lowest targets – to the people at the highest positions. This mechanism usually ensures meeting the targets - the highest-level employees get their premiums and awards, while most of the ordinary employees are not capable of reaching their targets. The employees motivated in this manner do their best to achieve the required profitability of the products and services they sell, trying at all cost to get their annual bonuses. The vision of high rewards, and the daily testing of achievability of targets lead to constant pressure for results, stimulating the creation of shareholder value. Such model of bank management leads to unethical and illegal practices by employees, who focus only on the tasks correlated with their fluctuating pay. It is human nature to pursue the largest possible personal gains. Unfortunately, there are dangers proportional to those gains, resulting from moral hazard, i.e. negative personal qualities, such as a tendency for embezzlement and dishonesty. Also, the correlation between the system of motivation and arbitrary budget tasks increases the fear of failure - losing the part of pay dependent of reaching the targets, losing the job etc. The employees' sense of insecurity and anxiety in the face of ruthless mechanisms of accountability for budget targets leads to a situation where the bank, as an organisation, starts to self-deceive, or becomes a scene of unethical behaviour. The motivation of people in management positions within the bank is

another matter. Very often its operation relies on managers obsessed with power, ego-driven, orientated towards maximising their earnings and other elements of the system of motivation, and concentrating on increasing their personal prestige. As emphasised by A. Damodaran, “there is no mechanism of increasing value, which would infallibly increase company value in a situation where maximising this value is not the managers’ basic objective. When other goals stand in the way of this primary one, managers are able to deceive any measurement of increasing corporate value. However, if the managers are fully committed to maximising company value, almost any measurement of value increase can prove effective. Secondly, regardless of which measurement of company value is linked to managers’ earnings, they will, in time, start concentrating on maximising this measurement, rather than the corporate value itself” (Damodaran, 2007, p. 1258). J.K. Galbraith, too, leaves no room for illusion: “the myths of the investor’s power, the ancillary shareholder and the ritual board meetings and annual shareholders’ meetings still persist, but no intellectually competent observer of a modern corporation can get away from reality. The power in a corporation is held by the management – a bureaucracy controlling its own objectives and its own earnings. The rewards sometimes border on theft” (Galbraith, 2005, p. 47). Little wonder that creating an atmosphere of internal competition, using various forms of pressure and coercion, tolerating unethical behaviour of people obsessed with advancing within the organisational hierarchy and with high earnings, contribute to violating the basic principles of cooperation with customers, employees and other stakeholders in a bank (Table 1.)

*Table 1: The examples of the most spectacular cases of malpractice by European banks (original research)*

Type of fraud	Chosen banks involved in the malpractice
Money laundering	Deutsche Bank, UBS, Royal Bank of Scotland, Lloyds, Barclays, HSBC, Danske Bank, Bank of China, ING
Doing business with countries subject to international sanctions	Deutsche Bank, BNP Paribas, Credit Suisse, Lloyds, Barclays, ABN Amro, ING, Standard Chartered, HSBC
Manipulating the EURIBOR and LIBOR rates	Barclays, Deutsche Bank, Société Générale, Royal Bank of Scotland, Citigroup, JP Morgan, UBS
Participating in organised tax fraud	Deutsche Bank, UBS, HSBC, Credit Suisse
Manipulating market currency exchange rates	Royal Bank of Scotland, Citigroup, HSBC, JP Morgan, UBS, Barclays, BNP Paribas
Preparing incorrect financial reports	Bankia, Goldman Sachs, Lehman Brothers
Misleading investors	Credit Suisse, JP Morgan, Citigroup, Bank of America
Unauthorised actions by brokers	Barings Bank, Allied Irish Bank, Société Générale
Unauthorised influence upon the prices of derivative instruments	Royal Bank of Scotland, JP Morgan, UBS, Credit Suisse, Barclays, Deutsche Bank, Société Générale
Manipulating toxic mortgage credits	Deutsche Bank, Credit Suisse
Establishing fictitious customer accounts	Wells Fargo
Leaking confidential information concerning trading in the financial markets and market research	Deutsche Bank

It is rather symptomatic that the quoted banks had generally been considered exemplary in terms of good banking practice, professionalism and reliability. According to Boston Consulting Group (BCG), during the years 2009-2016 banks were fined the total of USD 321 billion in connection with various cases of malpractice (Figure 1.)



*Figure 1: Penalties paid by banks in the years 2009-2016 in connection with malpractice [USD billion] (The Boston Consulting Group, Global Risk 2017. Staying the Course in Banking, Boston, March 2017, p. 16)*

The American supervisory institutions were most restrictive, issuing 56% of all fines (USD 179 billion). 38% of penalties were compensations paid out to customers of banks, and only 6% of the fines went to the European regulators. According to the calculations by Financial Times, the highest fines were paid by the Bank of America – USD 56 billion. This amount includes the fines against two financial institutions the Bank of America took over: the mortgage lender Countrywide and the investment bank Merrill Lynch (Scannell, 2017). The scale of penalties paid by banks illustrates the apparent collapse of their ethos as public trust institutions. The banks' social responsibility, the principles of corporate governance and norms of ethical conduct proved to be but a collection of clichés without any transference to reality. L. Dziawgo argues that “a large part of the ‘public trust’ resource has already been lost, and yet banks keep going” (Dziawgo, 2009, p. 110). Banking proved to be a branch of business which, as many other sectors of the economy, is focused on the “greed is good” principle, and pays no attention to the ways in which its key objectives are achieved.

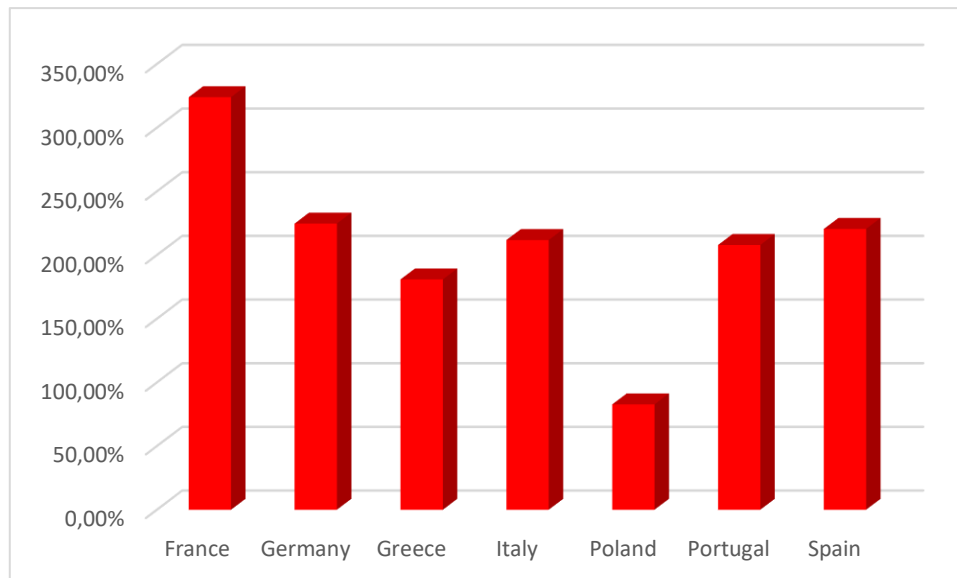
### **3. THE SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTION<sup>1</sup>**

The investors, analysts and the media today expect no less than spectacular success: systematically growing profits, ever increasing productivity, reduction of operating costs etc. At the same time, the investors change their expectations regarding the invested capital, decisively shortening time frame within which they require satisfactory returns in the form of share price appreciation and payment of dividends. All this leads to a sort of paradox – demanding higher than average results in comparison with the average profits obtained by the remaining banks in the sector. Such perception contributes to the unwavering belief in bank

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<sup>1</sup> Global Systemically Important Banks (G-SIBs) are determined based on four main criteria: (a) size, (b) cross-jurisdiction activity, (c) complexity, and (d) substitutability. The list of G-SIBs is published annually by the Financial Stability Board (FSB).

managers' ability to systematically improve any future profits. In reality, permanent creation of a bank's value is practically impossible in a market economy, of which slowdowns are a natural part. Constant pressure leads to a search for innovative solutions that can help surpass competition, but at the same time contribute to ever more risky endeavours. This situation led to the creation of banks too large or too important to fail (TBTF – too big to fail and TITF – too important to fail)<sup>2</sup>. Soon, it became apparent that those banks could generate excessive systemic risk in the global markets, should they require rescuing. The proof of the size of such banks and the scale of potential costs necessary to save or aid such a bank is that often the assets of a banking sector can be higher than a GDP of a developed country (Figure 2.)



*Figure 1: Total assets of all domestic banking groups and stand alone banks, foreign (EU and non-EU) controlled subsidiaries and foreign (EU and non-EU) controlled branches [% of nominal GDP 2016] (original research based on data of International Monetary Funds, European Central Bank, Polish Financial Supervision Authority)*

An ex-post evaluation of the situation has to lead to a reflection about the consequences of the global expansion of the largest financial institutions. They have become powerful financial conglomerates, and their operation is becoming less and less connected with financing anything real. They evolve towards investment banking, for which, once again, derivatives are the main source of profits. The mechanisms of creating international banking groups with numerous subsidiaries in different countries, of using mergers and acquisitions to hide the actual economic and financial situation of a bank, have been well known. The entire system founded on complicated derivative instruments, which led to financial instability of several significant banks, and even threatened the solvency of individual countries, may, once again, be used in investment policies of certain banks, which are subordinated to personal goals of strategic investors or managers. Obviously, banks as participants in the financial market operate in accordance with the logic of the market economy, and strive to allocate their capital in a manner maximising their return on investment. However, it is worth analysing whether the SIFIs operating the current way do not violate the market balance. Hindrance to free competition, which results from the domineering role of those banks, comes from their access to the economies of scale and synergy, easier access to capital in international monetary markets,

<sup>2</sup> The term TBTF is associated with a speech by the American congressman Stewart McKinney, who used it in May 1984, referring to the Continental Illinois.

strong influence upon the market of bonds and treasury securities, capability to finance large investment projects, ability to shape trends regarding the pricing of banking products and services, modelling the standards with regard to the product range and channels of distribution, diversification of income sources and picking the preferred customer segments etc. A bank ought to aim at limiting the risk of its operation, as an institution of public trust, obliged to guarantee the safety of the financial resources deposited by customers, and to provide comprehensive services to private and institutional customers alike. However, constant pressure from investors, the necessity to gain competitive advantage in the long term and the motives of its managerial staff facilitate innovative and unique actions, which are connected with increased risk in the bank's operational, financial and investment activities. Consequently, banking operation ought to be a rational compromise between the bank's developmental objectives and its natural aspiration to maximize profits, and the necessary level of security. A situation in which the whole of society bears responsibility for errors and malpractice of a few bank managers is not acceptable. The statist solutions used to save the financial sector from the aftermath of modern crises have revived the theoretical dispute between the supporters of state interventionism and its opponents, who believe in the effectiveness of market mechanisms. The necessity to implement rescue plans proved that the financial markets would not spontaneously regulate themselves, and that the state cannot completely give up on intervening in the economy. At the moment it is impossible to rescue a systemically important bank without social consequences, and particularly without using financial resources coming from ordinary taxpayers. This raises a purely ethical question: is it appropriate to finance high-risk banking operation from the taxpayers' money? It is difficult to ignore the fact that practically no one was held responsible for the recent crises (neither managers of banks, nor representatives of supervisory institutions, rating agencies, audit offices etc.), even though all those people knew about the actual economic and financial situation of banks, and made no attempt to share their knowledge. Long-term results of government projects supporting the banking sector may prove negative not only for other parts of the society, but also for the situation within the sector itself. Applying wide-range interventionism is demoralising. Government aid and support provided by central banks in the countries experiencing the crisis contribute to maintaining the status quo. Introduction of rescue plans causes the risk of banks abandoning their internal restructuring actions, due to the conviction that in case of trouble private banks will be saved by the state's interventionist policy. Boards of individual banks are free to continue with their risky investments, and may weaken their reparative actions, in the hope of receiving help from the state (Nier, Baumann, 2006, pp. 332-361). It is therefore crucial not only to determine the scale of state assistance, but, even more importantly, to establish its main directions and principles of granting, so that it does not lead to ineffective asset allocation (according to the rule of applying only the regulations which are absolutely necessary, and securing as much market freedom as is possible).

#### **4. THE MODERN MODEL OF BANKING OPERATION – IMPLICATIONS FOR THE FUTURE**

Banking sectors are currently facing new challenges in connection with the changing external environment in which credit institutions operate in unified Europe. Those challenges include:

- the commencement of the Banking Union's full operation in all three safety dimensions, providing for the transfer from the national to the EU level of the competences of supervisory institutions, as well as (perhaps most importantly), of the remaining mechanisms guaranteeing the stability of financial systems;
- the necessity to ensure capital adequacy in accordance with the provisions of the new Basel IV Capital Accord;

- implementing the PSD2 directive, which will compel banks to open to the non-bank suppliers of payment services (e.g. Google, Amazon, Apple, Alibaba), who are interested in development of broadly defined payments;
- moving away from traditional banking (closing down branches, and job reductions), in favour of mobile banking and automated outlets, equipped with modern, interactive tools (touch screens, biometric equipment etc.);
- arrival of new, innovative solutions, which rationalise contacts with customers and serve their needs (cloud computing, Big Data, etc.);
- elimination of cash transactions, both between businesses and private individuals (some Scandinavian countries have already announced abandoning cash transactions in the future).

This means significant re-evaluation. Significant and inevitable changes await the banks' traditional functions, such as transformation of assets (bank as an intermediary between individuals and institutions who seek sources of financing, and the investors, who want to invest their savings), risk management, processing information and monitoring debtors, and in particular providing clients with access to the payment system. For example, the new Payment Service Directive 2 2015/2366 (PSD2) by the European Parliament and Council, of 25 November 2015, has introduced new types of services:

- payment initiation service and
- account information service,

which make it possible for the provider of payment services to initiate payments from the client's account in any bank, and to provide the client with full information about the accounts he or she owns in different banks. Furthermore, the Directive introduces a concept of strong client authentication by using at least two criteria from three categories: knowledge (PIN or password), possession (e.g. personalised token), and client's characteristics (biometric identification). Implementation of the Directive by the member states, which must take place by 13 January 2018 (with the exception of the regulations pertaining to the new client identification security measures) may mark the next breakthrough in banking, comparable with online and mobile banking.

The fundamental question of the objective of business operation is going to remain valid: should a bank maximise shareholder value, or should it focus on a broader scope of objectives connected with the expectations of the remaining stakeholders? The arguments of the supporters of the agency theory, the transaction cost theory and the information asymmetry theory clearly show that it is unrealistic to expect a solution, which would reconcile the shareholders' goal with public interest. However, we are not to assume that without legal regulations the banks will re-orientate their operation away from the up-to-date and complicated methods of financial engineering, and towards the traditional, more realistic modes of conducting banking operation. As long as there is a temptation of profits higher than in the traditional operation, there will be bank managers steering the banks' activities towards the areas correlating with their earnings, regardless of the incurred risk. Therefore, it seems justified to redefine the modern banks' model of business operation, and to fundamentally simplify their functioning. Very few people realise how incredibly complicated today's banking operation is (too complex to be understood), how remote the banks' capital and organisational connections are, and how relatively high the cost of supervising their activity is. It is important to mention that, apart from the political bodies dealing with banking sectors, such as the G8, the G20, Council of the European Union, the European Council, Economic and Financial Affairs Council – ECOFIN, Eurogroup, etc., there are also a number of supra-national institutions, such as Financial Stability Board – FSB, European Systemic Risk Board – ESRB, European System of

Financial Supervisors – ESFS, European Banking Authority – EBA, and ECB – the European Central Bank. The ambition to create new regulatory and decision-making structures, which originated in the time of crisis, is a natural response to lack of stability. However, such actions require a clear answer to the questions: what end do they serve? what are the expected effects and what instruments are going to be used in order to achieve the proposed objectives? New structures should not be created, unless they can be filled with meaningful contents. It is also important to define competences and responsibilities of the new structures, and to avoid overlapping and duplicating tasks and prerogatives. Another important issue is the obligation to report to the institutions demanding more and more information, which, apart from costs, generates problems with processing, storing and coherence of data, particularly in the context of trans-nationality of the banking operation.

The existence of several institutions operating in similar areas radically increases the costs of their operation, and increases the duration of the decision-making processes. The idea of creating supra-national banking supervision which would control the processes in the global financial markets is by all means commendable. Nevertheless, the most important role will be played by the cooperation between institutions in individual countries. The financial crises clearly exposed the weakness of supra-national institutions. Economic interests of individual countries have an impact mainly at the national level. Instead of a unified stance and joint intervention, the countries within the Union acted individually, and one could question whether those actions were in accordance with the EU competition policy and the rules of granting public assistance. (Table 2.)

*Table 2: Value of public aid for the financial sector in chosen European countries in the years 2008-2015 [EUR billion] (European Commission)*

Country	Aid used in the years 2008-2015				
	Recapitalisations	Impaired asset measures	Guarantees	Other liquidity measures	Total
Austria	11,8	0,5	19,3	0,0	31,6
Belgium	20,8	21,8	46,8	0,0	89,4
Croatia	0,0	0,0	0,0	0,0	0,0
Denmark	10,8	0,3	145,0	2,0	158,1
France	25,0	1,2	92,7	0,0	118,9
Germany	64,2	80,0	135,0	4,7	283,9
Greece	46,6	0,0	62,3	6,9	115,8
Ireland	62,8	2,6	284,3	0,9	350,6
Italy <sup>1</sup>	11,8	0,0	85,7	0,0	97,5
Netherlands	23,0	5,0	40,9	30,4	99,3
Poland	0,0	0,0	0,0	0,0	0,0
Portugal	15,3	3,1	16,6	3,8	38,8
Spain	61,9	32,9	72,0	19,3	186,1
United Kingdom	100,1	40,4	158,2	33,3	332,0

1 902,0

<sup>1</sup> Italian banks have obtained significant assistance in the year 2017 as well.



The scale of granted assistance clearly shows that the existing structure of the financial security network is not suited to the needs of executing supervision, protecting the clients and supporting the financial conglomerates in crisis situations. The key question remains – in the face of such high costs of rescuing and restructuring European banks, should we continue to allow them to invest in high-risk derivatives? Banking systems have become too large to be included in possible public assistance programmes. At the moment, it is difficult to assess whether the newly created EU institutions within the banking union are capable of ensuring safety for the clients of banks. Therefore, it might be justified to find out whether there is a political consensus to divide SIFIs into smaller banks by regulatory decisions, separate their investment banking, and at the same time limit the acceptable scale of their operation (e.g. in the form of acceptable market share). If the banks are to be public trust institutions which, due to the specific character of their operation and its economic and social significance, need to act with utmost diligence, then they cannot supply arguments to the contrary and undermine their own reputation. The trust invested in banks by their clients depositing their resources ought to translate into a conviction that the bank in its operation will act with the highest level of professionalism and credibility, and that it will avoid risky investments. As observed by A. Janc and J. Szambelańczyk, “managing a bank is a very complex and difficult art. The more stabilised the conditions of operation, the less art, and the more skill is required of the management” (Janc, Szambelańczyk, 1999, p. 187). Perhaps the profits will not be as spectacular, nor will they be achieved as quickly as in the case of using sophisticated mathematical and econometric models, but it will allow for a stable, systematic growth of the banks’ value in the long term.

## 5. CONSLUSION

Prioritising shareholder value will remain the dominant model to which the strategies of modern banks will conform, and on which they will be based. The issue remains of finding the optimal balance between maximising shareholder value and taking into account the interests of other groups in the bank’s environment. Another outstanding problem is the question posed by F. Fiordelisi and P. Molyneux, whether the approach based on maximising shareholder value is appropriate for all commercial banks throughout the banking sector, and whether the actions of all banks should necessarily be subjected to this objective (Fiordelisi, Molyneux, 2006, p. 34).

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## CAN SPIRITUALITY BE USEFUL IN VOCATIONAL TRAINING OF INFORMATION AND COMMUNICATION TECHNOLOGY PROFESSIONALS? REFLECTION FOR FUTURE RESEARCH

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### **ABSTRACT**

*Most of the previous researches on spirituality have been conducted in psychology, counselor education and practice, marriage and family therapy, and supervision. Literature clearly depicts the importance of spirituality in both learning environment and ICT but there exist a significant research gap linking spirituality with vocational training of ICT professionals. The objective of the present research is to explore the linkage between spirituality and vocational training of Information and Communication Technology (ICT) professionals. To obtain a better understanding of performance in learning environment, trainee should be studied from physical, psychological, and spiritual dimensions. Though the physical and psychological dimensions of individuals at work have been measured comprehensively, the spiritual dimension has been ignored for many years. The methodology used in this research is qualitative in nature and the main data collecting instruments are biographical interviews. After qualitative research, the author used the quantitative method to construct the patterns from dimension of spirituality. Initial results show that there is significant impact of spirituality in vocational training of Information and Communication Technology (ICT) professionals.*

**Keywords:** *ICT professionals, Spirituality, Vocational Training*

### **1. INTRODUCTION**

A growing body of research reveals the importance of spirituality in psychology, counselor education and practice, marriage and family therapy, and supervision (Cappellen et. al., 2016; Jafari, 2016; Weber & Pargament, 2014; Uota, 2012). Some of the researchers consider spirituality as an important concept in their identity and two-thirds of Americans look spirituality as important (Young, Wiggins-Frame, & Cashwell, 1998). This is quite evident in the literature that there is significant impact of spirituality in people's lives. This consists of the way people live, work and behaves. Individual spirituality, workplace spirituality and spiritual well-being was also found to be positively associated to organizational results, for example work attitudes (Milliman et al., 2003), organizational performance (Neck & Milliman, 1994) and transformational leadership (Hartsfield, 2003). These studies clearly show that scholars who have explored workplace spirituality have studied spirituality on not only on the individual level but also on group and organizational levels. The results of these studies clearly show the significant role of spirituality in the psychological well-being of human being. In connection with theory, Viktor Frankl, founder of Logotherapy and Existential Analysis, have strongly emphasis the meaning of life (Frankl 1959) which is one of the most popular dimension of spirituality. Moreover, Maslow's (1954) self-actualization and esteem needs are equated with Herzberg's (1966) motivators, and Alderfer's (1972) growth need and all these needs have been shown to be related to spirituality (Walt, 2008). Vocational Education and Training (VET) is centrally placed in economic and social policy throughout the world (Dempsey, 2013). The development of the system of VET represents a priority assumed by Europe 2020 development strategy (Deaconu & Mocanu, 2016). The European Centre for the Development of Vocational Training (Cedefop) has published a report in 2011 which highlights the significance of VET in different European countries (Cedefop 2011). In Switzerland, VET plays a vital role in the training of a highly skilled workforce, and the strong connections between VET and the broader

Swiss education system (Hoffman & Schwartz 2015). This is quite evident in Australia and the United Kingdom, VET is tightly linked to job performance (Dempsey, 2013). In the economies of developing countries, VET is considered as the solution of the problems of academia (Tilak, 2002). As far as the Asian countries are concerned, they have placed particular focus on vocational education and training in formal and non-formal education system (Mustafa et al., 2005). In both rich and poor societies, VET is equally important to individuals, employers and governments of each political persuasion. In Australia, VET system is considered as highly important for its contribution to the improvement of practical skills and skilled labor (NCVER, 2010). In China, keeping in view the importance of VET, the government's is responsible to offer a quality assurance framework in which private and public VET providers will operate (Hillier, 2012). As far as theoretical connectivity of VET is concerned, Human Capital Theory which emphasizes the contribution of education and training to individual as well as organization productivity (Becker 1962) is related to the occupational structure of the labor market and the labor market institutions. Most of the researchers have connected VET with Human Capital Theory (Becker 1975; Mincer 1974; Nilsson 2010; Schultz 1961). There is a dramatic change in the world of work in the last 20 years, which has not only changes the social life and foundations of economies but also the skills, knowledge and competencies required by the people in every field of life (Mitchell & Ward, 2010; Baker et al. 2012; Dempsey, 2013). The driving forces that has changed the world of work includes dramatic changes from agricultural or industrial ages to the knowledge era. Some of the other forces includes the technological advancement that causes constant change in economic and social life, progressive globalization of trade and communications, and demographic changes resultant from developments in social conditions (Guthrie, Perkins, & Mitchell, 2005). The constant state of instability in employment and the world of work clearly means that current education systems cannot train and educate people according to the expectation of the society (Dempsey, 2013). To meet the challenges of contemporary societies, lifetime learning has become an authoritative strategy and is most related to the VET sector (Cornford et al., 1996). The most challenging task for policy makers and VET institutes is to increase the quality of training to fulfil the growing demands for technical and skilled workers (Guthrie 2010; Wheelahan 2011). To obtain a better understanding of performance in learning environment, trainee should be studied from physical, psychological, and spiritual dimensions. Though the physical and psychological dimensions of individuals at work have been measured comprehensively, the spiritual dimension has been ignored for many years (Walt 2007). British social work students and British social workers report that spirituality has very hardly been explored with them in their professional training (Furman et al., 2004; Furness, 2012). Keeping in view the above facts, this is the dire need of time to explore the spiritual dimensions in vocational training perspective.

## **2. LITERATURE REVIEW**

### **2.1. Spirituality**

Spirituality is abstract in nature. It is important to define the construct of spirituality in order to obtain its practical applicability to the workplace. The logical starting point of this research is to define the construct of spirituality which is being investigated. This is quite unfortunate that there is not clearly acknowledged operational and conceptual definition of the spirituality construct presently exists. Most of the researchers like Dent, Higgins and Wharff (2005) are also agree with this point of view that the construct clarity of spirituality is deficient. Several definitions and methods of workplace spirituality have been proposed, which are often inadequate and imprecise (Kolodinsky et al., 2004). The basic purpose of current discussion is to improve the present knowledge of the procedure of spirituality. There are several definitions of the spirituality construct are used. It is quite clear in the literature that different authors understood differently about the construct of spirituality. This is quite important to clearly

explain the construct of spirituality. Most of the authors have common consensus that spirituality discusses the meaning and purpose in living, an internal experience of events of living over thoughts, a value component, sensational and emotions experiences, self-transcendence, and a connectedness to a Higher Being. According to Wheat (1991:92), the operational definition of spirituality "... the personal valuing, experiencing or behavioral expression of (a) a larger context or structure in which to view the events of one's life, (b) an awareness of and a connection to life itself and other living things, and (c) a relevant compassion for the welfare of others ...". The leading factors acknowledged by Wheat (1991:92) are the larger context containing aspects such as selflessness, truth, justice or morality, and meaning and purpose in life; consciousness of life, which contains personal development and wholeness. Wheat (1991:92) suggested a systematic, encompassing and practical definition of spirituality because it contains most of the crucial factors of spirituality acknowledged by different authors in Table 1. According to David Hay, awareness sensing, mystery sensing and value sensing are some of the important categories of spiritual sensitivity (Hay 2001) which are very helpful to understand the concept of spirituality. The author used the David Hay concept of spiritual sensitivity as a starting point of discussion regarding spirituality in the current research. According to David Hay, Spirituality plays an important role in building integrity and trust in the organizations. Awareness sensing is the experience of a deep sense of connection between a physical experience and thought. Mystery sensing denotes the capacity to transcend the everyday through the application of awe and wonder and imagination. Value sensing emphasises the importance of feelings as a measure of value, reflecting upon what one finds to really matter (Nemme 2008).

## **2.2. Vocational Training and ICT**

Training is an important activity of Human Resource Development (HRD). HRD is a process of improving human efficiency through personnel training and development to improve the performance (Swanson, 1995). There are different types of trainings and vocational training is one of them. The definition of VET provided by Descy et al. (2009) in their report on VET in Europe: "Vocational education and training (VET) comprises of all more or less organized or structured activities whether or not they lead to a recognized qualification. The qualification aims to provide people with knowledge, skills and competences that are necessary and sufficient in order to perform a job or set of jobs. The content of VET could be job-specific, directed to a broader range of jobs or occupations, or a mixture of both." Different VET institutes provide a wide range of programs which includes traditional trades, advanced technical training, paraprofessional and professional studies and basic employment courses and trainings (Dempsey, 2013). Vocational Education and Training (VET) is centrally placed in economic and social policy throughout the world (Dempsey, 2013). VET is widely considered a sensible policy strategy for improving the job prospects and the social inclusion of young people (Fleckenstein 2016). Some of the benefits of VET are mentioned in the Figure 1. VET provides a wide range of subjects and programs (Dempsey, 2013) and ICT is one of them. There are different ways of defining ICT depending upon the individual's level of knowledge and subjective point (Duy 2013). ICT can be defined as "a collective term for a wide range of software, hardware, telecommunications and information management techniques, applications and devices, and are used to create, produce, analysis, process, package, distribute, receive, retrieve, store and transform information" (Barba-Sánchez et al., 2007) within and outside to organization (Modimogale & Jan 2011). In other word, ICT not only covers computers and internet but also covers other technologies. During the last decade, ICT have gained significant attention and are considered as important skills in the 21st century (Griffin et al., 2012). Educators, government and private organizations and employers have recognized the need for modern learners to gain 21st century skills using ICT, to personalize student learning (Keane et

al., 2016). A study conducted jointly by European Union and United States on Emerging Skills and Competences, ICT is considered as one of the key developments of 21st century education and lifelong learning skills (Shapiro et al. 2011). Actually, ICT is found to be a key driver of productivity growth in the developed economies over the last two decades (Wong 2007). ICT have made accessing and searching of information easy and available for everybody (Siddiq et al., 2016). In fact, ICT is playing an important role in the academia and industry.

### **2.3. Relationship between Spirituality and Vocational Training**

Learning is a repetitive process of designing, implementing, reflecting upon and adjusting action (Edmondson, 1999). Learning in an institute takes place at different levels like individual, group and organizational levels (Marsick & Watkins, 2003; Casey, 2005). Spirituality at institute or work is about search for meaning or higher purpose, connectedness, inner life and transcendence (Petchsawang & Duchon, 2012; Miller & Ewest, 2013). Like learning, spirituality at work also understood at both the individual and the collective levels (Kolodinsky et al., 2008; Giacalone & Jurkiewicz, 2008). Vocational training is one aspect of learning and it must have some connection with spirituality. Vocational training institutes provides different subjects and programs including traditional trades, paraprofessional and professional studies, advanced technical training and basic employment courses (Dempsey, 2013). ICT training is one of the significant vocational training program equally popular in academia and all types of industries. The research from Moore (1934) to Marzano (2003), educators and theorists have been reviewing and sharing quality practices to progress student performance (Wright 2016). To some extent, the role of spirituality is studied at individual-level learning (e.g., Tisdell, 2008; Dirks, 2013). Pandey (2016) found positive impact of spiritual climate on learning. However, association between spirituality and learning is not examined in vocational training institutes especially in ICT professionals. Academic researchers have tried to find to determine what works in schools for many years. Student Spirituality and School-Based Counseling have been given more importance from last two decades of scientific research in positive psychology, medicine, counseling, and other associated disciplines that connect spirituality to positive student outcomes, including physical, mental, and psychosocial health (Cleveland 2016). In order to get a better understanding of performance in learning environment, trainee should be studied from physical, psychological, and spiritual dimensions. Though the physical and psychological dimensions at work have been measured comprehensively (Walt 2008), the spiritual dimension has been ignored for many years (Walt 2007) in vocational training of ICT professionals.

## **3. RESEARCH METHODOLOGY**

Research methodology changes according to the nature of research. The changes happening in the world has changed the way to investigate the phenomenon (Milena and Dalnora 2008). Due to researchers' diverse beliefs about the nature of information and the procedure by which knowledge is gained and authenticated, educational research studies are involved in different research approaches (Robson 2016).

### **3.1. Research Design**

#### *3.1.1. Mixed Method Research*

The second phase of research methodology is based upon mixed method research which is a combination of both qualitative and quantitative methods of research. The present research implements a qualitative approach first, which is inductive and concerned with the meaning of what is being studied, rather than with measuring it. Spirituality is an abstract concept. The concept of spirituality may not be observed easily. Each individual may have a different perception and experience about spirituality.

The use of qualitative explorative research is helpful for exploring the concept and outer limit of spirituality. In current research, author conducted biographical interviews from each research participant. The main purpose of the interviews is to gain an understanding of each individual's perception and experience of spirituality in vocational training. Qualitative research includes the following methods: interviews, participant observations, focus groups, case studies and historiography, ethnography and phenomenology, grounded theory and content analysis (Maxfield, & Babbie 2005). The methodology used in this research is qualitative in nature and the main data collecting instruments are biographical interviews. After qualitative research, the author used the quantitative method to construct the patterns from dimension of spirituality. As far as mixed method research design is concerned, most of the researchers have similar opinion about mixing or combining qualitative and quantitative approaches in the same research design and the authors believe that its quite practical and feasible to use mixed method research (Reichardt & Cook 1979; Johnson et al. 2007; Robson 2016; Rubin & Babbie 2016). Mixing or combining qualitative and quantitative research methods within the same research is a quite practical and essential approach to knowledge that includes theory and practice (Johnson et al. 2007). Moreover, mixed methods research is helpful to understand diverse perspectives, viewpoints, positions, and standpoints in the research process. To highlight the importance of mixed method research in social research, Johnson et al. (2007) intensely support the idea that mixed methods research can be placed as one of the three research approaches (i.e. qualitative research, quantitative research, and mixed methods research). Furthermore, in mixed method research, 'Qualitative dominant mixed methods research' is defined by Johnson et al. (2007) in which qualitative strategies are pre-eminent. Therefore, researchers who support qualitative view of the research process normally use qualitative dominant mixed methods research and they identify that most research projects can gain possible benefits from the additional quantitative data and approaches (Johnson et al. 2007). In this research, the author has used 'Qualitative dominant mixed methods research' approach.

### **3.2. Data Collection**

The data will be collected from the pass out trainees of ICT professionals belongs to western and Islamic culture. There will be 6 pass out trainees that belongs to western culture and 6 pass out trainees that belongs to Islamic culture. Detailed biographical interviews have been conducted for this research study. Each question was developed to be open-ended so each participant would be able to discuss in detail their experiences, reactions, and perspectives regarding spirituality and vocational performance. Also, some questions were developed so that the participants could explore further into deeper meanings of spirituality and their connection with the vocational training in their life. The place of the interviews was selected by keeping in view the comfort level of each participant.

The open-ended questions were developed to promote the discussion among participants. A total of 12 pass out trainees (6 and over) were interviewed using the open-ended questions. A written consent was taken from each participant at the time of interview that contains the purpose of the research study. Moreover, the interview was strictly voluntary, and each interview will be kept strictly confidential. It was clearly notified to each participant that the interview would be tape-recorded and each participant was also agreed for tape recorded interview. The interview of each participant was tape-recorded. Each recorded interview was labeled with an identification number and contained no formal names written on the tapes. Relevant themes and themes were identified from each interview that were related to the purpose of the research study. The output of the interviews will be spiritual dimensions and then the author has used quantitative research method for further analysis of these patterns.

### 3.3. Data Analysis

Important themes and categories of spirituality were taken using codes from the tape-recordings. Emerging codes were established after debriefing with thesis supervisor, Tomasz Ochowski. The codes were further refined through analysis and organizing of interviews. The author will use Nvivo 11 computer software to analyze the interviews. The output of the interviews will be spiritual dimensions and then the author used quantitative technique (dendrites' analysis according to Wrocław taxonomy) to establish the structural way for qualitative analysis and interpretation.

### 3.4. Limitations of the Research

Spirituality is relatively new field of discussion specially in vocational training perspective. The researcher may not be able to explore enough group of factors that could be important in this field. The current research might be conducted in cross cultural perspective so that the impact of culture can also be measured in spiritual perspective. The research has only explanatory nature.

### 3.5. Implications of the Research

The researcher wants to explore what kind of spiritual dimensions exists in vocational training of ICT professionals which was neglected for many years. The practical contributions of this research will show the relationship of Spirituality with Vocational Training of ICT professional and how this relationship can be used to enhance the quality of vocational training and to improve knowledge and skills of the trainees. Keeping in view the qualitative nature of the research, Classical works such as Maslow's (1954) conception of needs, Alderfer's (1972) growth need and Viktor Frankl (1959) work of Logotherapy and Existential Analysis, there may be some addition of the new dimensions of spirituality in the existing theories.

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## INTERRELATION RESEARCH BETWEEN RESOURCE INTENSITY OF ECONOMY AND MODEL OF INNOVATIVE DEVELOPMENT

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### **ABSTRACT**

*Competitiveness of separate economy is determined by its opportunity to export high-technology goods due to increase in level of technological effectiveness of production and a gain in productivity of work. At the same time the capability of the developing economy to export high-technology goods depends on a number of factors, including inflow of the direct foreign investments (DFI), efficiency of scientific research, quality of state regulation, and also other factors. A considerable factor of development of economy is its resource intensity which level influences the speed of technology development. Within this research influence of such factors as DFI and outflow of foreign investments, payments for use of intellectual property items and export of resources for export of high-technology products in the countries with the average level of the income is analyzed. Results of this analysis allow to draw to us a conclusion that a number of factors positively influences a capability of the country to export high-technology goods on the world market. Also on the example of Russia influence of resource intensity of economy on production of high-technology products and its export is proved negative. The conducted research allowed to formulate a conclusion that resource dependence of the Russian economy is the factor constraining innovative development of economy. Also by results of the carried-out analysis it was established that the greatest positive impact on export of high-technology production in Russia is exerted by a payment for developed technologies. The received results are important for the analysis of the reasons of competitiveness of economy of developing countries. For the analysis data of Worldbank, and also data of Federal State Statistics Service of the Russian Federation were used.*

**Keywords:** *a payment for use of OIC, export of high-technology products, DFI, , resource intensity of economy, Russia*

### **1. INTRODUCTION: CONDITIONS OF DEVELOPMENT OF ECONOMY**

According to M. Porter's concept the unique reasonable concept of competitiveness at the national level is performance, but not stability of national currency, level of an interest rate or budget deficit. At the same time, a main objective of the state is the stable growth of level of living of the citizens. Achievement of this purpose is provided by means of performance which, in turn, provide the involved manpower and the equity of the country (Porter, 2006, pp. 215). The fact that performance depends on quality and properties of products, and also on production efficiency is important. Production efficiency provides growth of competitiveness and dynamics of development of national economy. Economic development is in turn indissolubly connected with opportunities of the country to purchase, master, extend and apply innovations and new technologies (Rodríguez-Pose, Crescenzi, 2008, pp. 56). In this sense the innovation is understood as process of a recombination of the existing technologies and resources, and also generation of the new ideas in new technologies and products (Schumpeter, 1982, pp. 114). In Russia active state policy on forming of national innovative system is pursued in recent years. However the model of economic development operating in Russia import of high-technology

products from the most developed countries prevails so far. Functioning of economy on the "export of resources-import of the equipment and technologies" model doesn't provide development of innovative system, and the innovative cycle comes down only to closing stages – development and commercialization. Proceeding from practice of certain developing countries, application of such strategy in the short-term period can promote building-up of national innovative capacity due to absorption of new technologies, their implementation in production processes, and also acceptance of the best the practician of management. However as practice shows, one of the major factors providing efficiency of such model of economic development are the direct foreign investments promoting not only to inflow of new production methods, but also new knowledge and methods of management (Aitken, Harrison, 1997, pp. 611). In the available researches devoted to competitiveness analysis of developing countries in addition to direct foreign investments such factors as the level of own research costs and development, the number of the made patents, level of institutes and state regulation of economy are allocated (Auty, 1990, pp. 45). Also resource intensity of economy acts as one of the conditions which are directly determining competitiveness of economy and its opportunity to export high-technology goods. According to this provision of the country, having large volumes of natural resources, the countries which don't have abundance of resources (Auty, 2000, pp. 63) are characterized by slower rates of economic development, than. With respect thereto within this research we will try to prove that developing countries are positively influenced by such factors as direct foreign investments, payments for use of intellectual property items. Also in article the hypothesis that export of natural resources and raw materials negatively influences technology development of national economy and respectively for export of high-technology products will be checked, confirming provisions of the theory of a so-called "resource damnation" (Neumayer, 2006, pp. 1634).

## **2. HYPOYHESES AND METHODOLOGY OF A RESEARCH**

### **2.1. Resource intensity of economy and high technology production**

In a modern international competition various companies compete within global strategy with involvement not only a manpower, but also foreign investments (Porter, 2006, pp. 364). There are models which confirm positive effects from foreign investments. In model of endogenous growth of PII act as an important source of improvement of quality of a human capital, increase in amount of new technologies (Grossman, Helpman, 1994, pp. 24) and through this improvement of PII positively influence economic growth. Nevertheless, outer effects from PII don't arise automatically. The amount of outer effects depends on that in what degree the local entities are ready to invest in training. It is connected with the fact that transfer of new technologies happens through interaction of local and overseas enterprises (Borensztein, De Gregorio, Lee, 1998, pp. 119). In many researches the hypothesis of positive influence of PII on the host country proves to be true (Blomstrom, Kokko, 1998, pp. 254). There are also other researches which find positive communication between PII and performance of the industry in developed and developing countries (Lall, 2005, pp. 51). Importance of PII for developing countries is confirmed by many researches of domestic and foreign economists, including Heifetz, Aytken and Harrison (Aitken, Harrison, 1997, pp. 619). Other models show that the amount of technology transfer depends on political environment and an economic configuration of the host country (Markusen, 2002, pp. 110). The political situation and the investment climate determine the volume of investment into national economy (Kuklina, 2014, pp. 132, Blomström, Sjöholm, 1999, pp. 918) . Therefore the opinion that for creation of competitive economy the investment climate in the country which will influence directly amount of the accepted new technologies is important is widespread. That is the second important condition of increase in competitiveness of the developing economy are the new technologies developed as within the country, and purchased in more developed countries. With respect thereto in article

dependence between export of high-technology products and amount of receipts for use of intellectual property items, and also the number of requests for patents is researched. The first hypothesis of a research are the regulations that major factors of increase in competitiveness of the developing economy, in case of use of model of borrowing of innovations, are the direct foreign investments and technologies purchased in more developed countries. Many economists consider natural resources as a potential source of the income for economy of the certain country, considering that a part of the available resources remains and will be transformed to the equity for maintenance and increase in the future in production volume. For example, the raw rent can be used for construction of roads, upgrade of telecommunication systems, development of health care and education. Experience of some countries really demonstrates that the raw rent can become a source of upgrade of economy. For example, in the 19th century the income from natural and resource sector stimulated economic development of these countries in the countries of Latin America. Similarly, industrial revolution in Great Britain and Germany became possible only thanks to big deposits of ore and coal (Sachs, Warner, 1995. pp.105). For the first time the phenomenon of a resource damnation or the Dutch disease was researched by Corden, W.M (Corden, Neary, 1982, pp. 831). For the analysis of impact of resource sector on economic development the basic model of economy which consists of three sectors, namely natural and resource, production and non-productive was constructed. In each sector specific production factors and work are used, at the same time the prices of production factors are flexible, there is a production factor mobility within the country. The prices of natural resources and prices for goods of an occupational sector are established in the international markets, and goods prices and services of non-productive sector are determined in the domestic market. Results of the constructed model demonstrated that influence of sector of natural resources on economy extends through movement of resources, including the equity and work. "The boom in sector of natural resources increases a marginal product of work and the labor power moves from production and non-productive sectors to sector of natural resources" (Dülger, Lopcu, Burgaç, Ballı, 2013, pp. 608). It, in turn, leads to a salary increase in sector of natural resources to and to reducing the production rate in production and non-productive sectors of economy, provoking effect of so-called deindustrialization. Besides, growth of the income in resource sector leads to increase in the aggregate demand and import. In the researches Sachs, J., Warner, A. it is noted that despite potentially salutary impact of availability of resources on economic prosperity of the country, raw economies, as a rule, grow at slower rates. It is noted that throughout the last two centuries, the country rich with natural resources, such as Russia, Nigeria and Venezuela are characterized by lower rates of economic growth. For a dependence research a boundary resource intensity of economy and dynamics of innovative development research influence of export of resources on export of high-technology products. In this case the hypothesis according to which high resource intensity of national economy influences its competitiveness, including a capability is checked to export high-technology products. Dülger, F. notes in the course of transition to free market economy, Russia couldn't diversify the economic structure, despite increase in the income from natural resources. At the same time in the last decade in the Russian economy increase in a share of export of natural resources and decrease in a share of industrial production is observed. "Therefore, the Russian economy strongly depends on export of natural resources, is vulnerable to external shocks of the prices of natural resources" (Dülger, Lopcu, Burgaç, Ballı, 2013, pp. 611). In general researches concerning the analysis of the Russian economy regarding availability of symptoms of "a resource damnation" very small due to the lack of sufficient amount of statistical data. However in the majority of the available researches, authors come to a conclusion that Russia shows symptoms of resource dependence (Algieri, 2004, pp. 32). Also in the Development program of the United Nations, it is noted that Russia can suffer from resource dependence in the future that can also become a basic reason of deindustrialization of

economy (IMF, World Bank, OECD and EBRD, 1991, pp. 128). In general it is possible to note that, despite the revealed symptoms of resource dependence concerning the Russian economy, all authors incline to a conclusion that precisely it isn't possible to establish availability of "a resource damnation". We expect that export of resources will negatively influence export of high-technology products. Also it is expected that influence of an indicator of direct foreign investments in the Russian economy won't be determining because their amount in the Russian industry is insignificant.

## 2.2. Dependent and independent variables

For confirmation of the first hypothesis influence of various factors on export of high-technology products is analyzed. This selection included 106 countries which according to Worldbank have the average level of the income. The analysis across the Russian Federation regarding dependence of export of high-technology products on export of resources is separately carried out. Within this analysis Multiple Regression model was used. This model is applied to forming of the standardized and not standardized regression coefficients estimating influence of each independent factor on a dependent variable. Communication of a dependent variable with independent variables is described by the following equation:

$$\text{Hightech} = a + b_1 \text{FDI\_inward} + b_2 \text{FDI\_outward} + b_3 \text{Use\_IP\_payments} + b_4 \text{Use\_IP\_receipt} + b_5 \text{Patent\_applicatios\_residents}$$
 where Hightech represents high-technology export expressed percentage of export manufactured and is a dependent variable. Independent variables: FDI\_inward and FDI\_outward, respectively inflow and outflow of direct foreign investments, percentage of GDP, Use IP payments and receipt – Charges for the use of intellectual property, payments and receipts, and Patent applicatios residents – requests of residents for patents (Aitken, Harrison, 1997, pp. 613).

Dependence between innovative processes and forms of financing of innovations during various historical periods and conditions of development of the industry are considered in many researches. Recently there was a large number of researches in which influence of inflow of direct foreign investments on various innovative strategy in developing countries. Researches of World bank confirm that inflow of direct foreign investments is the vital source of investments as they for the state, and private sector and promote development of new technologies, expansion of knowledge and development of the competition (Borensztein, De Gregorio, Lee, 1998, pp. 132). Foreign investments allow the entities to purchase new technologies, nevertheless, the domestic companies can suffer from negative effects, including of decrease in a market share of the local entities of an industry, of loss of qualified personnel. But according to the UN (2001), the positive effect from a foreign competition exceeds negative effects in most cases (Borensztein, De Gregorio, Lee, 1997, pp. 123). Researches show that not only inflow of direct foreign investments exerts impact on export of high-technology production, but also and outflow of direct foreign investments from the country (Meyer, 2001, pp. 726, Cuervo-Cazurra, 2007, pp. 268, Gammeloft, Barnard, Madhok, 2010, pp. 97). Outflow of private foreign investments can improve country competitiveness by creation of the international industry value chain in combination with technology on the basis of comparative advantages of the certain countries (Meyer, 2004, pp. 268, Luo, Sun, Wang, 2011, pp. 192, Corden, 1984, pp. 364). Also exerts impact on export of high-technology production such internal factors as dynamics of amounts of a royalty and license fees and patents of residents (Alvarez, Marinb, 2013, pp. 241). These factors influence a possibility of creation of innovations within the country, and consider creation and potential of internal absorption of high-technology production, and also the international distribution of technologies. The number of observations for each variable – 20. Ranks of data are provided by a time span from 1996 to 2015. All dynamic ranks integral, admittance cards in values are absent. The model is

constructed according to the statistical data provided to Worldbank. The matrix (Tab. Correlation matrix of variables (1)) shows pair correlation between variables, and testifies to a possibility of creation of model with this set of the interacting factors.

*Table 1: Correlation matrix of variables(1)*

Variables	High tech	FDI_inward	FDI_outward	Use_IP_payments	Use_IP_receipts	Patent_applications_residents
Hightech	1					
FDI_inward	0.329	1				
FDI_outward	0.002	0.413	1			
Use_IP_payments	0.097	0.296	0.972	1		
Use_IP_receipts	0.096	0.346	0.930	0.948	1	
Patent_applications_residents	0.036	0.114	0.916	0.965	0.91	1

In table Descriptive statistics the descriptive statistics (1) of ranks of dynamics on each of indicators is provided. High-technology export is characterized by min – 12.5, max – 19,7.

*Table 1: Descriptive statistics(1)*

Variables	observ.	mean	min	max	std.dev.
Hightech	21	1,719544e+01	1,255361e+01	1,973644e+01	2,085959e+00
FDI_inward	21	2,732526e+00	1,894718e+00	3,843921e+00	5,109979e-01
FDI_outward	21	1,059543e+11	1,145396e+10	3,034537e+11	1,024642e+11
Use_IP_payments	21	2,243076e+10	2,953407e+09	6,092652e+10	1,909231e+10
Use_IP_receipts	21	1,932233e+09	3,039398e+08	6,139237e+09	1,555325e+09
Patent_applications_residents	21	2,372995e+05	4,669600e+04	8,763800e+05	2,507308e+05

The analysis across the Russian Federation was separately carried out. A number of dynamics of data includes the period from 1996 to 2014. Number of observations – 19. Calculations are made by means of the same model, as well as the analysis of group of the countries with average earnings. Relations dependent and independent variables can be characterized the following equation:

$$\text{Hightech} = a + b_1 \text{FDI\_outward} + b_2 \text{FDI\_inward} + b_3 \text{Use\_IP\_payments} + b_4 \text{Use\_IP\_receipt} + b_5 \text{Patent\_applications\_residents} + b_6 \text{export\_of\_mineral\_products}$$

where Hightech – high-technology export, % of manufactured export, FDI\_outward and inward – outflow and inflow of direct foreign investments, in % of GDP, Use\_IP\_payments and receipt – payments and receipts for use of intellectual property items, one million dollars, Patent\_applications\_residents – the request of residents for patents, piece, export\_of\_mineral\_products – export of mineral products, one billion dollars. To all above-mentioned indicators which were used also in the previous model, such indicator as export of mineral products is added. It is entered for confirmation or confutation of a hypothesis about influences of export of resources on country competitiveness in general, and on an opportunity to export high-technology goods in particular. So researches showed that 97 countries at which the high share of export of natural resources in structure of GDP is observed have low growth rates of GDP (Meyer, Mudambi, Narula, 2011, pp. 241).



Statistical data on the following indicators: requests of residents for patents, export of mineral products are taken from the portal of Federal State Statistics Service of Russia. Data on other indicators are also taken with Worldbank. Pair correlation between factors of this model is reflected in table Correlation matrix of variables (2). In connection with data from a matrix it is possible to carry out the further analysis.

*Table1: Correlation matrix of variables(2)*

Variables	High tech	FDI_inward	FDI_outward	Use_IP_payments	Use_IP_receipts	Patent_applications_residents	export_of_mineral_products
Hightech	1						
FDI_inward	0,040	1					
FDI_outward	0,493	0,817	1				
Use_IP_payments	0,841	0,327	0,690	1			
Use_IP_receipts	0,875	0,269	0,637	0,961	1		
Patent_applications_residents	0,688	0,562	0,828	0,843	0,826	1	
export_of_mineral_products	0,716	0,550	0,808	0,950	0,900	0,899	1

*Table1: Descriptive statistics(2)*

Variables	observ.	mean	min	max	std.dev.
Hightech	20	4,931327E+09	1,890656E+09	9,842669E+09	2,325396E+09
FDI_inward	20	2,107659E+00	4,866558E-01	4,502704E+00	1,217664E+00
FDI_outward	20	2,166043E+00	2,353722E-01	3,876041E+00	1,164960E+00
Use_IP_payments	20	2,877276E+09	2,530000E+06	8,370790E+09	2,968847E+09
Use_IP_receipts	20	3,253680E+08	2,703000E+07	7,378900E+08	2,344945E+08
Patent_applications_residents	20	3,216190E+04	1,510600E+04	4,425600E+04	1,032146E+04
export_of_mineral_products	20	1,780285E+02	3,050000E+01	3,760000E+02	1,303356E+02

In this case the matrix also reflects pair correlation between variables, and testifies to a possibility of creation of model with this set of the interacting factors.

### 3. RESULTS

The model provided in the previous section is intended for an impact assessment of various factors on the competitiveness of the developing economy which is characterized by such indicator as export of high-technology products. Results of model for confirmation of the first hypothesis are provided in table Multiple Regression model. The obtained data demonstrate that the most significant factor influencing export of high-technology products is the payment for use of intellectual property items. A factor, the second for the importance, are direct foreign investments. At the same time, as expected, outflow of direct foreign investments shows negative dependence. It is possible to assume that the countries included in group with the average level of the income use the strategy of borrowing of new technologies. And higher measure value of a payment for use of intellectual property items can demonstrate that in these countries own technological base of production which allows not to use at this stage the foreign equity any more is created but only to purchase production technologies. The standard mistake in model is less than unit that allows to speak to us about high reliability of the received results.

*Table 1: Multiple Regression model*

Variables	Multiple Regression model
FDI_inward	0,858
FDI_outward	-3,577
Use_IP_payments	3,445
Use_IP_receipts	-0,2347
Patent_applications_residents	0,1022
Number of groups	106
R2	0.924
Standard deviation (FDI inwards)	0.276

Standard errors in parentheses  $p < 0.0007$

For confirmation of the second hypothesis we constructed model for the Russian economy in which influence of such factor as export of resources is researched. The standard mistake in model constitutes 0,009 that testifies to high reliability of the received results. These models allow to claim that, as expected, influence of export of resources on export of high-technology products is negative. Also considerable influence of such factors as inflow of direct foreign investments, a payment for use of intellectual property items, and also the gained income from intellectual property is observed. As well as in the first case export of high-technology products is negatively influenced by outflow of direct foreign investments.

*Table 1: The results of the multilevel model. the Russian Federation*

Variables	Multiple Regression model
FDI_inward	0,858
FDI_outward	-3.921
Use_IP_payments	0.426
Use_IP_receipts	0.492
Patent_applications_residents	0.667
Export_of_mineral_products	0.114
Number of groups	-0.585
R2	1
Standard deviation (FDI inwards)	0.853
	0.32

Standard errors in parentheses  $p < 0.0009$

Hypothesis that high resource intensity of national economy influences its competitiveness, including a capability to export high-technology products. For the last decades Russia faces economic, institutional and political reforms after disintegration of the Soviet Union in its adaptation to free market model of economy. In the course of transition to free market economy, Russia couldn't diversify the economic structure, despite increase in the income from natural resources. In the last decades while the share of natural resources in export of the income considerably increased, the share of industrial production decreased. Therefore, the Russian economy strongly depends on export of natural resources and is vulnerable to external shocks of the prices of natural resources. Also the highest negative impact on export of high-technology production in the Russian economy is exerted by outflow of investments. According to the available researches outflow of investments from developing countries can cause significant

damage to development of internal production. It should be noted that the sizes of the equity crossing country borders in the opposite direction more are connected with structural problems in economy and depend on quality of state regulation. From the point of view of policy of prevention potential the capital flight can be stopped due to stabilization of the domestic financial markets and enhancement of an internal tax base (Cuddington, 1986, pp. 68). However as practice shows, even in developed countries regulation of capital outflow is rather difficult a task. Positive influence on dynamics of export direct foreign investments which are recognized quality of the main channel of transfer of new knowledge and technologies influence. Researches of World bank confirm that PII are the vital source of investments as they for the state, and private sector and promote development of new technologies, expansion of knowledge and development of the competition (IMF, World Bank, OECD and EBRD, 1991, pp. 147, Meyer, 2001, pp. 62). Foreign investments allow the entities to purchase new technologies, nevertheless, the domestic companies can suffer from negative effects, including of decrease in a market share of the local entities of an industry, of loss of qualified personnel. But according to the UN (2001), the positive effect from a foreign competition exceeds negative effects in most cases (United Nations, 2001). Availability of outer effects from a foreign competition induces the governments of many developing countries to pursue the policy directed to involvement of foreign investors. The entities of the host country receive new technologies through multinational corporations as in a different way it is difficult to receive new technologies (Caves, Richard, 1999, pp. 125). Distribution of technology leads to performance improvement of the entities of the host party. Outer effects from a foreign competition can be gained diversely. First, on the basis of the got experience from implementation and use of new technology. At the same time the entities can adapt not only new technology, but also new forms of production organization and management (Blomström, Kokko, 1996, pp. 9). Secondly, the employees who got a work experience in multinational corporation can work in domestic-owned firms, transferring the new knowledge. The greatest impact on export of high-technology production is exerted by the income from the made intellectual property. Over the past three decades, global trade policies and the composition of world trade have changed dramatically. Many developing countries (South) of started raising their intellectual property rights (IPRs) protection levels and building the necessary institutional framework. Thus, one of the most important conditions of innovative development of the Russian economy are technologies developed within the country. State policy on stimulation of innovative activity of the organizations and entities of the researches and developments occupied in the sphere is the effective instrument of building-up of innovative potential of economy at the current stage of development.

#### **4. CONSLUSION**

In this research an attempt to prove interrelation between the factors characterizing type of innovative development of economy and export of high-technology products is made. It is considered that direct foreign investments are the main source of inflow of new technologies and knowledge to developing countries. At the same time as shows the carried-out analysis, the most significant is influence of such factor as a payment for use of intellectual property items. It can be connected with the fact that technology development of economy is in the analyzed group of the countries at such level that will allow to make products on the available equipment, and to borrow only the production technology or methods. Also in this article the hypothesis according to which abundance of natural resources is the factor constraining technology development of national economy proves to be true. Reasons for this interrelation allow us to claim that in developing countries export of natural resources negatively influences export of high-technology products. Distinctive feature of our research from previous is that for the analysis of the factors influencing export of high-technology production such indicator as

export of natural resources which in our case has negative influence was chosen. The conducted research allowed to formulate a conclusion that resource dependence of the Russian economy is the factor constraining innovative development of economy. Also by results of the carried-out analysis it was established that the greatest positive impact on export of high-technology production in Russia is exerted by a payment for developed technologies. The received results are important for the analysis of the reasons of competitiveness of economy of developing countries. In our opinion further researches can be concentrated on the analysis of interrelation a boundary by resource intensity of economy and parameters of technological effectiveness of an economic system in the countries which are at the different levels from technological border.

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## EMPHASIS ON SOCIAL DIVERSITY: SEEKING FUTURE RESEARCH PROSPECTS

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### ABSTRACT

*On one hand, this paper aims at exploring how social capital relates to heterogeneous social identity as measured through religious diversity, gender and ethnic diversity by considering them as instruments to social capital in a growth model. On the other hand, this paper develops a relationship between social capital and economic growth keeping in view human capital and physical capital as transmission channels which intervene to explain indirect impact of social capital on economic growth. In this study, social capital as measured through 'trust' appears to have an endogenous impact on economic growth. Researcher wants to employ panel data on selected variables and will try to explain this issue of endogeneity with the help of estimation technique i.e. Generalized Method of Moment (GMM).*

**Keywords:** *Economic Growth, Social Capital, Social Diversity*

### 1. INTRODUCTION

The concept of social capital is most commonly interpreted as 'trust'. It has been existing in literature on economics since multiple decades. As Coleman (1990) points out that "trust is conduct of an individual for another person that one will act consistent with one's expectations". Literature has categorized trust into two larger categories i.e. general and specific trust. Specific trust is related to close circles like friends and family. It has also recognized as thick trust (Newton 1999). While general or interpersonal trust is the other category of trust amongst individuals which are out of close circles like family and kinship (Putnam 2000). It is considered as the supportive actions among people particularly in outside family group. (Putnam 2000). Hakansson and Sjöholm (2007) values this division trust, which is one of the indicator of social capital, into and partial and generalized trust. The former is about trusting people in general, both people who are known and strangers, and the latter about trusting people who are perceived as being in 'one's own' sphere. Ethnic differences might negatively affect both types of trust. Social identity theory tells us that the more a person differs from oneself, the less likely it is that we will trust this person (Tajfel 1982; Messick & Mackie 1989; Brewer & Pierce 2005). Ethnicity is one factor that is likely to be important for trust, with trust being higher between individuals of similar ethnicity. It follows that ethnically heterogeneous societies will show relatively lower levels of partial trust and thereby relatively lower levels of overall trust. High diversity is associated with low economic growth (Easterly and Levine, 1997), poor public goods provision (Alesina et al., 1999; Baldwin and Huber, 2010), low quality of institutions (La Porta et al., 1999). One important mechanism through which high diversity leads to such outcomes is the reduction of social cohesion. Most of the discussion on social cohesion revolves around trust, a reliable indicator of social cohesion (Freitag and Bühlmann, 2009; Stolle, 2002) and a concept widely recognized in the existing broader social sciences literature. According to Coleman (1988), interpersonal trust has a significant impact on educational decisions of a society. Bjørnskov (2009) also described the relationship between trust and educational decisions. Higher level of social capital in the families causes lower high school dropout rates (Coleman 1988). Bjørnskov further explains that there should more developed human capital in communities that are abundant in social capital. Putnam (2000) further maintains that children education can be poor in rich communities if adults are not having good social network.

Even in the communities having high levels of material wealth, children education may be poor if the adults' social networks are not well developed. Higher trust level increases social capital and social capital boost up investment in human capital (Dearmon and Grier 2009). There is also evidence on importance of relationship between trust and education in the labor market. Firms prefer to hire an individual who has good human capital accumulation to carry out complicated responsibilities. More complicated tasks require an extra monitoring cost. These costs will reduce if firms hire labor force who are rich in human capital acquisition. The monitoring costs are also reduced if firm's demand for human capital rich labor force. Employees, with high level of human capital under higher trust levels, may be better cooperate with other employees to increase the firm's profits. The empirical studies in literature have also confirmed the direct association between educational returns and trust.

## **2. LITERATURE REVIEW**

In the early 1990s, this concept of sociology witnessed a renewal since it was implemented by political scientists like Putnam et al. (1993) and Fukuyama (1995). Putnam et al. (1993) describes social capital as 'features of social life such as networks, norms, and trust that enable participants to act together more effectively to pursue shared objectives'. According to these views, social capital converts into a virtue of nations where persons obey the law, the leaders are elected in a democratic way and there is a high level of collaboration between them. Political scientists have focused on the level of social capital in small groups, measure social capital in big communities and nations by different indicators such as participation in the election, political turnout, and membership in associations. Putnam et al. (1993) has presented the influential contribution to the literature on the social capital and growth. In this literature, the author describes the positive and significant correlation between social capital and economic performance. In a later study that was conducted on Italian provinces, it has been found that the social capital shows a positive impact on the long run economic growth (Helliwell and Putnam 1999). To answer how social capital and economic growth are related to each other, first we identify heterogeneity in social identity of individuals in a society as factor that influence social capital. Secondly, we consider human capital and physical capital as transmission mechanisms that establish a link between social capital and economic growth. Studies reveal significant ethno-racial gaps in trust (Smith 1997, Alesina & La Ferrara 2002, Uslaner 2002). For instance, Smith (1997) finds that members of minority groups report substantially more misanthropy (less trust) than members of the majority. Apart from ethnicity, religion is also found to be associated with trust in many studies. Some of these studies are cross countries which found the negative effect of hierarchical religion i.e Islam, Catholic Church and Orthodox churches, or other religions, on trust (La Porta et al., 1997; Zak and Knack, 2001; Berggren and Jordahl, 2006; Bjørnskov, 2007); there are some signs of a positive effect of Protestantism (Uslaner, 2002; Guiso et al., 2003; Delhey and Newton, 2005). While discussing gender as another dimension of social identity we mainly highlight the findings of Cho (2016) who shows that gender discriminatory values negatively affect the trust levels of both men and women, while women's status in labor, education, and political dimensions is not a significant determinant. These results indicate that values regarding gender equality (fair values) are arguably more important to social trust than the actual socioeconomic conditions of women (fair conditions). Several empirical studies suggest that women trust others less than men, possibly because they are more frequently subjected to discrimination and the rules of the game are unfair to women (see Algan & Cahuc, 2010; Glaeser et al., 2000). This finding leads to the argument that gender equality is a driving force of promoting social trust. In fact, empirical evidence supporting the role of women's empowerment in the enhancement of trust and social capital is well-documented—Janssens (2010) sites the effects of women's empowerment programs on social capital in Indian villages; Molinas (1998) references women's participation and cooperation in

Latin America; and Westermann, Ashby, and Pretty (2005) document women's participation in resource management and social capital in 20 countries. These studies focused on women's participation in micro-level programs that stimulated social capital in country-specific contexts. The second objective of this paper is to focus on devising a relationship between social capital and economic growth while considering human and physical capital as transmission channels. Most of the literature shows positive relationship between trust and economic growth. Literature also depicts that trust has played a significant impact in the development of human and physical capital. It is quite evident in the literature that trust is related to the physical capital growth. If trust maintains high quality and quantity of information, then it's helpful for firm to know about investment opportunities and precisely measure their chance of success. The need for extensive contract and expensive litigation is also reduced under high level of trust. At microeconomics level, there is also increase in investment under high level trust. Zak and Knack (2001) inspect the collective influence of trust on physical capital with a cross section of 41 countries and discover the fact that trust enhances investment. Education not only contributes to economic growth by building human capital but by imparting common norms and procedures that increase social cohesion (Gradstein and Justman, 2000). So, the education stimulates to collect human capital which causes cooperation among individuals, which is proficient to evolve social capital that lead to economic growth (Temple and Johnson, 1998; Helliwell and Putnam, 1999). There is considerable evidence that communities with a good stock of social capital are more likely to be benefited from higher educational achievement, better health in terms of life expectancy, and better economic performance. Thus, trustworthy and cooperative society helps faster economic growth.

### **3. ANALYTICAL FRAMEWORK**

There is a plenty of literature available which develops a link between trust and economic growth through different mechanisms. This section will take into account two different features. First, it discusses the theoretical linkage between social capital and economic growth. Secondly, it identifies the empirical model and the econometric methodology to evaluate the growth regression.

#### **3.1. Theoretical Framework**

Economists have always been interested in exploring the patterns and variations in the growth processes across countries. Growth theories offer an explanation about the determinants of economic growth. The most fundamental model of economic growth presented by Solow (1956) considered labour, physical capital and technology as determinants. With the passage of time this model has been augmented. Becker (1962) added into analysis other determinant like human capital. Hall and Jones (1999) focused more on social infrastructure. Latest studies by Dearmon and Grier (2009, 2011) analyzed that social capital contribute in improving physical and human capital. They found their results by using three equations in which they used GDP per capita, human capital and physical capital as explanatory variables respectively. Human capital and physical capital equations are estimated using simultaneous equation system while GDP equation is estimated independently. These studies have talked about impact of trust on economic growth. However, there are numerous other variables that explain variations and economic growth and these variables cannot remain unnoticed. Literature on the relationship between trust and economic growth has incorporated these variables as explanatory variables in their models along with variables of trust. The following discussion highlights these variables. Empirical literature has verified significance of human capital for economic growth e.g. Mankiw, Romer and Weil (1992) and Barro (1991). Other study, such as Romer (1990) has indirectly explored its effect on growth through technology. Human capital is likewise responsible for the productivity in physical capital with the help of research and development,



hence directly affecting economic growth. Empirical literature have explored that human capital not only directly affects economic growth but it is also a strong transmission mechanism through which social capital affect economic outcomes as proposed by Papagapitos and Riley (2009). Along with human capital, investment in physical capital has also been considered as major determinant of economic growth in different growth models such as Lucas (1998), Romer (1986). Guiso et al. (2009) has also proved a strong linkage between trust and investment in physical capital which ultimately affects economic growth. Thus, physical capital is taken as a significant explanatory variable determining growth and also an explanatory variable to further examine the impact of trust on it.

### 3.2. Model

Having discussed about the probable effects of other control variables on economic growth, we follow Dearmon and Grier (2009, 2011) to estimate the following model to analyze the impact of trust on economic growth, human capital and physical capital. The first equation follows the growth regression similar to Barro to identify the direct impact of trust on economic growth.

$$GDP = \alpha_0 + \alpha_1 GDP_{-1} + \alpha_2 T + \alpha_3 I + \alpha_4 HK + \alpha_5 LF + \alpha_6 TRADE + \alpha_7 INF + \alpha_8 GLOB + \alpha_9 interactionterms + \mu_1 \dots\dots\dots (1)$$

Where,

‘GDP’ is growth rate of per capita real GDP

‘GDP<sub>-1</sub>’ is first time period lag of GDP

‘T’ is social capital measured through trust and it’s a binary variable

‘I’ is share of investment in real GDP i.e investment divided by GDP and it measures physical capital

‘HK’ is human capital which is measured through percentage of students enrolled in secondary education level and those who are above 15 years of age.

‘LF’ is labor force; ‘TRADE’ is trade openness

‘INF’ is inflation, ‘GLOB’ is globalization.

Our model includes interaction terms as a product of trust with investment and trust with human capital. These terms provide an additional analysis through which it can be analyzed whether trust impacts economic growth through human capital or physical capital. Finally,  $\mu_1$  is the error term of regression equation 1. Equations of human and physical capital are as follow;

$$I = \beta_0 + \beta_1 GDP_{-1} + \beta_2 T + \beta_3 HK + \beta_4 INF + \beta_5 TRADE + \beta_6 INST + \beta_7 SC * INST + \mu_2 \dots\dots\dots (2)$$

$$HK = \gamma_0 + \gamma_1 GDP_{-1} + \gamma_2 T + \gamma_3 I + \gamma_4 LF + \gamma_5 TRADE + \gamma_6 INST + \gamma_7 SC * INST + \mu_3 \dots\dots\dots (3)$$

Where,

‘INST’ is the measure of institutional strength and interaction term ‘SC\*INST’ is a multiplicative of social capital, measured through trust, and institution. While, other variables in above two equations have already been defined in equation 1. Lastly,  $\mu_2$  and  $\mu_3$  are the error terms of equation 2 and 3 respectively.

### 3.3. Empirical Strategy

#### 3.3.1. Ordinary Least Square

The simplest way to estimate a regression equation is Ordinary Least Square. When independent variables are exogenous, OLS produces results which are consistent and with unbiased coefficients. Keeping this in mind, independent variables in our models should not depend on any other variables. But, as mentioned previously, trust is thought to be explained by other variables like human capital, income inequality and institutional quality (Algan and Cahuc; 2013 and Knack and Zak 2003). Furthermore, there is plenty of research evidence of bidirectional causality between inflation, trade, growth and human capital which leads to the simultaneity problem. Hence, important regressors may be omitted from the model. Barro (1991) used 300 explanatory variables in his model to determine economic growth which cannot be considered all at the same time. Ultimately, omitted variables lead to the problem of endogeneity. We use GMM estimation technique

#### 3.3.2. Generalized Method of Moments

For the solution of simultaneous equations model, and to obtain a transformed equation from the original equations, GMM technique is now widely used. Arellano and Bond (1991) proposed the GMM for the estimation of single equation model and the system estimation (Arellano, 1993) which is the generalized form of method of moments. This methodology allows the inclusion of instruments and can improve the efficiency of the estimated model. In our model, assuming social capital measured through trust is the only endogenous variable and the remaining variables are exogenous in equation 1.

$$T = \gamma_0 + \gamma_1 GDP_{-1} + \gamma_2 ETH + \gamma_3 REL + \gamma_4 GEND + \gamma_5 I + \gamma_6 HK + \gamma_7 LF + \gamma_8 INF + \gamma_9 TRADE + \delta_{10} GLOB + \delta_{11} interactionterms + \varepsilon_1 \dots\dots\dots$$

(4)

The instrumental variable used in GMM should have zero correlation with the error term and it should be a good predictor of endogenous variable. Therefore, it is necessary to check for the validity of the instrument used. For this purpose, Sargan test is applied with null hypothesis of valid instrument that means it is not correlated with the error term. It is also important to check for the strong correlation of instrument with the endogenous variable.

### 3.4. Data and Construction of Variables

Following are the variables under consideration of this essay along with their sources.

#### 3.4.1. Trust

Trust is measured through an international survey i.e. World Value Survey (WVS). It covers data from 102 countries and has been conducted in several waves. This survey comprises of question that derives the information regarding beliefs, norms, cultural values, attitudes and behaviors.

#### 3.4.2. Real per capita GDP growth rate

Following Barro (1991) growth model, we use growth rate or percentage change in real per capita GDP to measure economic growth which is calculated by dividing real GDP with total population.

#### 3.4.3. *Human Capital*

For our analysis, we derived data on human capital from Barro and Lee (2013) that describes human capital as percentage of individuals above 15 years of age who are enrolled in secondary education.

#### 3.4.4. *Investment in Physical Capital*

Investment share of real GDP is the measure for this variable and will be used in our analysis

#### 3.4.5. *Trade Openness*

The annual data is taken from Penn World Table (PWT 7.1) which calculates trade openness as:

$$\frac{\text{impots} + \text{exports}}{\text{GDP}}$$

#### 3.4.6. *Globalization*

Since globalization is proved to be helpful for the economic growth, we include it as an explanatory variable in our growth model. This is measured by using different variables regarding economic, political and social globalization that is acquired from "KOF Index of Globalization".

#### 3.4.7. *Inflation*

La Porta et al. (1999) suggested that higher trust leads to lower inflation while investigating impact of trust on large organizations. Knack and Keefer (1997) also supported the similar results. The data is taken from World Development Index (WDI).

#### 3.4.8. *Labour Force*

The measure under consideration is the labor force participation rate which is calculated by dividing labor force with the total population. The yearly data which is then averaged is taken from World Development Index (WDI).

#### 3.4.9. *Ethnicity*

We include the ethno-linguistic diversity index proposed by Fearon (2003), which combines an index of ethnic fractionalization with information on the similarity between the different languages spoken in each country.

#### 3.4.10. *Gender Equality*

To measure gender-related values, a question from the World Values Survey, whether one thinks that men should have more rights to a job than women, is used.

#### 3.4.11. *Religious Diversity*

Our data on religiosity derive from Gallup (2009), who asked respondents "Is religion an important part of your daily life?" Our measure is the share of the population that answered "yes" to this question. It not only has the benefit of being available at two levels (cross-country and cross-state); the validity of the question as a measure of religiosity and strength of beliefs has been previously corroborated (Halman and Draulans, 2006), making it a good complement to other measures in the literature.

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## SUPPLEMENTARY LEGAL REGULATIONS FOR DIRECT FOREIGN INVESTORS IN POLAND

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### **ABSTRACT**

*The current global trend is to reduce the significance of legal conditions in decisions on the location of direct foreign investments (DFI) as well as other traditional, so-called "hard" aspects thereof. This is the effect of the unification of those factors resulting from the effort of countries to occupy possibly the most advantageous position on the investment attractiveness map in view of the growing global competition. However, the author believes that, given the circumstances, in Poland, legal conditions may in fact be of major importance. This is because the legal determinants of the operation of foreign capital did not use to be stable, especially during a certain period. The reason was the creation of the market system, which required adjustments in legal regulations. Later changes in legal regulations were augmented by the effort to align with the European structures associated with the EU accession, which required legal convergence. Apart from the major legal regulations governing direct investments in Poland, there are also supplementary regulations, although supplementary does not mean to say of little importance. They supplement the core legislation and form part of the entire legal framework relevant to investing in Poland. The main goal of this paper is to describe changes in supplementary legal regulations relevant to direct investments in Poland from the beginning of the socioeconomic system transformation, i.e. from the transformational breakthrough until now. First of all, the paper will discuss changes in legal regulations governing the acquisition of real property by foreign nationals, which is strongly linked with international capital flows through DFI. Next, changes in the tax system for business entities with foreign capital will be presented, tax system being one of the most important elements of the business environment, taken into consideration investment decisions. Other supplementary legal regulations that the author thinks important in the existing reality will also be discussed. These are legal regulations concerning protection of competition, intellectual property protection, employment of foreign nationals or environmental impact assessment. The author uses the following methods: analysis, synthesis and comparative analysis.*

**Keywords:** *Acquisition of real property by foreign nationals, Act, Direct foreign investment, Supplementary legal regulations, Tax system*

### **1. INTRODUCTION**

System transformations in Poland were accompanied by changes in the business environment, including the legal conditions of the inflow and operation of foreign capital through DFI. Initially, separate legal regulations were developed for foreign capital, but in time, the rights of foreign and domestic entrepreneurs were equalised. Apart from the major legal acts, there are other regulations, suggested to be called supplementary, as they are associated with the inflow and operation of DFI and as such are auxiliary to the major legal acts. According to the author, their supplementary nature does not mean they are of little importance. The author believes that the changes in supplementary legal regulations relevant to DFI have in general been positive, although not always sufficient.

### **2. ACQUISITION OF REAL PROPERTY BY FOREIGN NATIONALS**

International capital flows through DFI are associated with the issue of the acquisition of real property by foreign nationals. The acquisition of real property by foreign nationals is still

governed by the Act on the Acquisition of Real Property by Foreign Nationals (originally: *Foreigners – Ustawa z dnia 24 marca 1920 r....*) of 24 March 1920, as amended. In that Act, a foreign national is: a natural person who is a non-Polish national; a legal person established abroad; a partnership without legal personality of persons referred to hereinabove established abroad under the laws of a foreign state; a legal person or commercial partnership without legal personality established in Poland, controlled directly or indirectly by persons or partnerships referred to hereinabove (*Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 1 lipca 2016 r....*). Prior to the amendment of the Act in 1996, a foreign investor, in order to acquire land or other real property, was required to obtain the permission of two central government officials: the Minister of Home Affairs and/or the Minister of Privatisation (the latter acted pursuant to the Act on Companies with Foreign Shareholding). The Minister of Home Affairs issued permissions in conjunction with the Minister of Defence, or, in the case of real property of special commercial, industrial or agricultural significance, also with other competent ministers ((Kozłowska, 1999, p. 99). After the 1996 amendment, permissions were issued as administrative decisions of the minister competent for home affairs with the approval of the Minister of Defence, or, in the case of agricultural real property, also the minister competent for agriculture. A permission was also required for perpetual usufruct by a foreign national (*Ustawa z dnia 15 marca 1996 r....*). Moreover, a permission of the minister competent for home affairs was required in order to acquire shares in a commercial company being the owner or perpetual usufructuary of real property, if: as a result, it would become a controlled company (at least 50% of share capital) or if it was a controlled company and the shares were to be acquired by a foreign national other than a shareholder of the company (*Ustawa z dnia 15 marca 1996 r....*). There were a number of exceptions from the rule: among other things, no permission was required, if the company's shares were publicly traded (*Ustawa z dnia 29 sierpnia 1997 r....*). At some point in time, changes in legal regulations governing the acquisition of real property by foreign nationals were influenced by the need to align with the EU requirements. Accordingly, the most important information on negotiations in this area between Poland and the EU should be presented here. The starting point for the negotiations was the non-convergence of the Polish legislation with the EU regulations, however, Poland requested for the following transition periods beginning with the date of accession: five years with respect to the acquisition of real property for investment purposes and 18 years with respect to the acquisition of agricultural or forest land. Poland's negotiation position on the freedom of foreign acquisition of real property was determined by specific historical, social and political factors that made it impossible to treat this area the same as the other areas of negotiations. It was the only area dominated by political factors. The Polish public opinion still is particularly sensitive to the issue of land ownership. Thus, the results of negotiations concerning the freedom of acquisition of real property could be decisive for the acceptance of the Treaty of Accession by Poles. Accordingly, it was concluded to be in the interest of both parties to fully understand the problem. Poland wanted to make sure that its citizens had an equal access to real property trading as EU citizens. It was feared that the financial possibilities of the latter could reduce the chances of Poles to acquire real property, as their relatively lower purchasing power would not allow them to effectively compete with foreign capital. Lower real property prices in Poland compared to EU Member States made and still make Poles (especially the older generation) fear that real property will be bought out by foreign nationals. The transition periods requested by Poland were also supposed to enable Poles to properly participate in the broad process of EU integration. The length of those periods was associated with the assumption that after the passage of the transition periods, the chances would be equalised and the reasons of anxiety would cease to exist due to the expected economic development of Poland and the resulting growth in the purchasing power of its citizens (Kozłowska, 2015, pp. 164-165). Another issue that was raised was that the Polish public opinion was sensitive to the problem



of optimum agrarian structure – on the one hand, a fear of too much fragmentation of agricultural property and on the other hand, a fear of excessive concentration of land and creation of huge properties that would prevent the development of economically sound structures of agricultural farms. Economically, socially and culturally, sound agrarian structure has a direct impact on the economic performance of agriculture (Kozłowska, 2015, p. 165). Despite the above difficulties, Poland was aware that it had to accept the Community law in this area. Thus, Poland declared that after the expiry of the abovementioned transition periods, freedom of capital flows would apply on EU terms to the acquisition of real property (Kozłowska, 2015, p. 165). Poland, when joining the negotiations, was fully aware of the importance of the freedom of capital flows as an integral element of the EU's Single Market, as well as of the economic consequences of the introduction of the Community acquis in this area. Thus, the Polish Government undertook to implement relevant alignments, especially in terms of its macroeconomic policies, specifically monetary and tax policies and foreign exchange rates. Poland was also fully aware that full liberalisation of capital flows was one of the preconditions to join the Economic and Monetary Union (EMU) (Kozłowska, 2015, p. 165). Considering the above, it was declared that any limitations hindering capital flows would also be removed from legislation by amending the existing laws or proposing new, comprehensive legal regulations. The Polish Government promised to make every effort to accelerate the Parliament procedures. The process was to be accompanied by necessary implementation measures through the strengthening of the existing institutional infrastructure and streamlining of the administrative procedures (Kozłowska, 2015, p. 165). Currently, the general rule set forth in the amended Constitution is that the acquisition of real property by foreign nationals requires a permit issued in the form of an administrative decision by the minister competent for home affairs. The minister may allow a foreign national to acquire real property or company shares, if it does not pose a threat to the defence and security of the State or to public order, and if the foreign national proves his or her links with Poland. This way, the administrative obstacles in the process of obtaining the permit were removed, among other things by limiting the participation of central authorities in the decision-making process of the minister competent for home affairs, namely the Minister of Defence and the minister competent for agriculture no longer have to give their permissions (like they used to) and they only have the statutory right of objection (the "tacit approval"). Upon Poland's accession to the EU, limitations concerning the acquisition of real property and the acquisition of company shares by individuals and entrepreneurs from the European Economic Area (EEA) that did not follow from the Community law and were not subject to transition periods were removed. As of 1 May 2004, the general rule that a permit is required for the acquisition of real property by foreign nationals and the acquisition of shares in a company that is the owner or perpetual usufructuary of real property no longer applies to individuals and entrepreneurs residing or established in the EEA. However, there was one exception in the law, namely that EEA nationals and entrepreneurs would need a permit to acquire agricultural or forest land during a period of 12 years following Poland's accession to the EU (which was not the original demand in the negotiations), i.e. by 2 May 2016. No permit was required in the transition period after the passage of three or seven years (depending on the region) of the certified date of execution of a lease agreement with a foreign national, if during that period the foreign national personally engaged in agricultural activity on the real property in question and legally resided in Poland (Ustawa z dnia 20 lutego 2004 r....). The issue of reprivatisation remains a problem. Lack of national regulations makes it difficult to purchase land. This concerns in particular investment projects from scratch, because investors are afraid that if the ownership status of land is not clear, claims may be made concerning that land after the project has been completed. This may also affect acquisition of existing businesses. Moreover, although foreign investors have their ownership rights guaranteed (especially in the Civil Code – Ustawa z dnia 23 kwietnia 1964 r....) as well as

protection against expropriation (especially in the Real Property Trading Act of 21 August 1997 – Ustawa z dnia 21 sierpnia 1997 r....), lack of the above regulations creates a loophole in the ownership protection system.

### 3. TAX SYSTEM

Changes in the Polish legislation concerning foreign capital were accompanied by changes in the system of taxation applicable to businesses with foreign capital share. A very favourable tax system was introduced by the Acts on Companies with Foreign Shareholding of 1982, 1986 and 1988, which automatically granted tax exemptions upon receipt of a permission to start business (Kozłowska, 1999, pp. 99-100). The Act on Companies with Foreign Shareholding of 1991 abolished the unconditional three-year income tax holiday that had been granted to foreign investors by the Act of 1988. Only the companies that had started business before 31 March 1994 retained that privilege (a separate law) (Kozłowska, 1999, p. 100). Since the entry into force of the abovementioned Act, the same tax has applied to all the business operating in Poland. However, the Act also provided for certain tax incentives for foreign investors. Companies whose shares were held by foreign investors before 31 December 1993 could apply until the autumn of 1996 for tax exemption (Kozłowska, 2015, p. 171), if the foreign contribution in their share capital exceeded the equivalent of 2 million ECU. Besides, they had to meet one of the following conditions: doing business in a region with a particular threat of structural unemployment, implementing new technological solutions in the national economy, reaching the value of export at least at the rate of 20% of total sales. The amount of tax exemption could not be higher than the amount of the invested capital (Ustawa z dnia 14 czerwca 1991 r....). Companies established pursuant to the Act of 1991 were granted with customs duty exemptions on fixed assets contributed to a company by a foreign entity. These assets were not subject to value added tax exemption (Kozłowska, 2015, pp. 171-172). Various tax reliefs were also governed by specific regulations, such as regulations of the Council of Ministers. Pursuant to those regulations, companies with foreign shareholding were entitled to tax reliefs according to the same rules as domestic businesses (Kozłowska, 2015, p. 172). Beginning with the early 1990s, the Polish tax system was gradually reformed. The intention was to encourage foreign investment in Poland and, consequently, to create new jobs. The reform of the tax system coincided with alignment of the Polish legislation with the EU laws, which resulted in the harmonisation of Polish and EU tax laws (Kozłowska, 2015, p. 172). Currently, the Polish legislation also provides for tax incentives. The Act on Certain Forms of Supporting Innovative Activities of 30 May 2008, updated in 2011 is worth noting. It grants enterprises with the status of a research and development centre real property tax exemption and agricultural and forest tax exemption (as *de minimis* aid – minor public aid that does not affect market competition, whose threshold since 1 January 2007 has been 200,000 Euro, and in the road transport sector 100,000 Euro for a business entity for subsequent three budget years). Pursuant to the Act, it is also possible to deduct from the taxable amount the sum of money allocated to an innovation fund (which may not exceed 20% of the revenue generated in a given location). The status of a research and development centre may be granted to entrepreneurs engaged in innovative activities, especially in the area of research and development (Ustawa z dnia 30 maja 2008 r....). Support for innovations also includes preferential tax deductions for the purchase of new technologies. According to relevant tax provisions concerning natural and legal persons, new technology is know-how in the form of intangible assets, in particular the results of research and development work, which enables the development of new or improvement of existing goods or services that have not been used in the world for a period longer than the last five years (Ustawa z dnia 26 lipca 1996 r....; Ustawa z dnia 15 lutego 1992 r....). As of 1 October 2010, entrepreneurs subject to taxation pursuant to the Personal Income Tax Act of 26 July 1991 have no longer been able to use this deduction

due to the entry into force of the Act on the Rules of Financing the Science of 30 April 2010, which is referenced in tax regulations governing the construction of tax deduction (Ustawa z dnia 26 lipca 1996 r....; Ustawa z dnia 30 kwietnia 2010 r....). The deduction was maintained, however, for entrepreneurs that pay corporate income tax pursuant to the Act on Corporate Income Tax and on Amending Certain Acts Governing Taxation of 15 February 1992 (Ustawa z dnia 15 lutego 1992 r....). Tax privileges also include exemptions on local taxes and fees as investment incentives for entrepreneurs on a gmina level. The Local Taxes and Fees Act of 12 January 1991 authorises gmina councils to determine tax rates and exemptions on the taxes and fees referred to in the Act (Ustawa z dnia 12 stycznia 1991 r....). Of major importance for entrepreneurs are real property tax exemptions. Exemptions on local taxes and fees may be introduced subject to the provisions of: the regulation of the Council of Ministers issued on the basis of the abovementioned Act, acts governing de minimis aid or acts governing aid granted within the framework of group exemptions. In most cases, gminas introduce exemptions on the basis of the first two. The regulation of the Council of Ministers is a country-wide assistance programme that constitutes a framework for providing regional aid to investors. Gmina councils may introduce, through a resolution constituting an assistance programme, tax exemptions in accordance with the solutions provided for in Community regulations on de minimis aid, whereupon such aid need not be notified to the European Commission (Kozłowska, 2015, p. 173). Preferential tax treatment is also applied in Special Economic Zones (SEZ). SEZ is a separate, uninhabited administrative territory, where economic activity may be conducted on preferential conditions determined in legal regulations (Kozłowska, 2015, p. 173). The rules of granting public aid in SEZ had, at some point in time, to be aligned to the EU laws. Following negative opinions of the European Commission concerning the terms and conditions of granting public aid in SEZ, the number of investors eligible for tax reliefs was limited to those who had received relevant permits by the end of the year 2000. The SEZ Act was amended in terms of granting public aid starting with the beginning of the year 2001. The Accession Treaty provided for possible solutions to the problem of tax relief rights acquired by entrepreneurs (also foreign entrepreneurs) in SEZ. However, a certain group of investors was affected by the new conditions of investing and doing business. The EU definition of an SME was applied, which takes into account capital links with other enterprises. Consequently, the number of enterprises that qualified as SMEs pursuant to the former definition dropped, meaning that the affected companies could no longer apply for public aid. Another problematic issue was real property tax charged since the year 2000. This problem affected in particular large enterprises operating in SEZ. However, the withdrawal of real property tax exemptions in Poland did not violate the guarantee of acquired rights, as the provisions of the Local Taxes and Fees Act did not guarantee permanency of the preferences. Nonetheless, numerous companies objected to the obligation to pay the tax on the grounds that they had been exempt from it upon the onset of the investment project. Regardless of the arguments of both parties, this situation undermines the reliability of Poland as a country with predictable conditions of conducting economic activity. Businesses with foreign capital did not consent to the new conditions and went to court (Kozłowska, 2015, pp. 173-174). Real property tax exemptions were restored by the Act on Amending the Special Economic Zones Act and Certain Other Acts of 2 October 2003 (Ustawa z dnia 2 października 2003 r....). To sum up, currently, tax reliefs in SEZ are governed by tax regulations referenced by the SEZ regulations. They cover income tax exemptions on economic activities (relevant income tax regulations) and exemptions on real property tax and other local taxes granted in certain gminas pursuant to resolutions of the local authorities (Local Taxes and Fees Act of 12 January 1991) (Ustawa z dnia 20 października 1994 r....). Income tax exemptions granted in SEZ constitute regional public aid the purpose of which is to accelerate the development of the least developed regions of the EU by supporting new investment projects and creating new jobs associated with those projects. Not all enterprises are entitled to the basic

incentive that is supposed to attract investors to SEZ. The right to exemption depends on the period when an entrepreneur must not transfer the ownership of the assets associated with the capital expenditure and the period of conducting economic activity (if the aid supports new investment projects), and the period when new jobs are maintained (if the aid supports the creation of new jobs). The abovementioned periods range, depending on the size of the enterprise, from three (for small and medium-sized enterprises) to five years, and if the conditions are not met, tax must be paid (Kozłowska, 2015, pp. 174-175; Ustawa z dnia 15 lutego 1992 r....; Ustawa z dnia 26 lipca 1991 r....; Ustawa z dnia 20 października 1994 r....). Real property tax and other local tax exemptions are granted in some cases to entrepreneurs performing economic activity in SEZ. The exemptions depend, in particular, on the amount of capital expenditure, the creation of new jobs and the duration of the investment project in the region. The amount of aid depends on the amount of capital expenditure or the labour costs associated with the new investment project (Ustawa z dnia 12 stycznia 1991 r....; Ustawa z dnia 20 października 1994 r....). Thus, an entrepreneur should check whether and to what extent it is possible to obtain tax exemptions in a gmina and if not, negotiate with the local authorities. However, the most important for the above tax issues are international agreements on double taxation and mutual support for and protection of investment. The provisions of such international agreements take precedence over other tax regulations (Kozłowska, 1999, pp. 100-101).

#### **4. OTHER SUPPLEMENTARY LEGAL REGULATIONS**

Below are listed and briefly discussed other legal regulations governing direct investment in Poland, which are considered to be the most important in the existing reality. The significance of competition law has increased in Poland, due to gradual liberalisation of the economy as well as EU accession. The basic objective of this branch of law is to protect entrepreneurs from other entrepreneurs hindering the development of free competition, affecting the freedom of pursuing economic interests on the free market. The fundamental competition law is the Competition and Consumer Protection Act of 16 February 2007. It is the basic legal act governing the control of anti-competitive agreements between entrepreneurs, dominant position abuse by entrepreneurs and concentrations (Ustawa z dnia 16 lutego 2007 r...). In a knowledge-based economy, one of the main determinants of competitive advantage and market success is intellectual property, covering copyright and industrial property. Notwithstanding the advantages of market position, industrial property protection ensures tax advantages. Intellectual property rights, as intangible property, are subject to depreciation, thus reducing the amount of taxable profit. Also, licensing may be a source of income, but it may also generate costs. In Poland, intellectual property is governed by two main legal acts: the Act on Copyright and Related Rights of 11 February 1994 (Ustawa z dnia 11 lutego 1994 r....) and the Industrial Property Act of 30 June 2000 (Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 13 czerwca 2003 r....) (expired on 29 November 2013 – Internetowy...). Direct foreign investors may be affected by regulations governing the employment of foreign nationals (especially as members of the managerial bodies of legal entities). They classify foreign nationals as EU nationals or third-country nationals, and the two respective groups are treated differently. In the first group, the criterion determining the scope of the freedom of labour in Poland is nationality. In the second group, the criteria and employment policies vary by profession. There are jobs, for which no employment permit is required by the law, or the permit application procedure is simplified and certain requirements are omitted. Recent amendments in the regulations are supposed to open the labour market for foreign nationals, e.g. the group of jobs that do not require a permit has been extended and the permit application procedure has been simplified (Kozłowska, 2015, p. 176). The fundamental legal act governing the employment and work of foreign nationals in Poland is the Act on Employment Promotion and on Labour Market Institutions of 20 April

2004 (Ustawa z dnia 20 kwietnia 2004 r....). Among supplementary regulations, it is worth noting the Regulation of the Minister of Labour and Social Policy on the Employment of Foreign Nationals without an Employment Permit of 30 August 2006 (repealed on 28 July 2011 – Internetowy...). It lists categories of persons that, due to the specific nature of their duties or their status, may be employed without applying for an employment permit (Rozporządzenie Ministra...). Every investor intending to implement an investment project in Poland should verify whether or not an environmental impact analysis is required for that project. The procedure is conducted in the case of projects that could have a major impact on the environment, as listed in the Regulation of the Council of Ministers on Projects with Possible Major Impact on the Environment of 9 November 2010 (Rozporządzenie Rady...). Environmental impact assessment is one of the core instruments for the management and legal protection of the environment, in line with the principle of sustainable development. The basic purpose of the assessment is to inform the decision-making public administration authority, whether the environmental interference of the project was planned in the most optimal way. More specifically, it is information on the advantages of the planned investment project that would balance the loss caused by its environmental interference. The purpose of the assessment is to envisage potential environmental threats and their scale at the planning stage of an investment project and to prevent or limit them, and to minimise the negative effects of the planned project (Kozłowska, 2015, p. 177). Initially, this issue was governed by the Environmental Protection Law of 27 April 2001, and currently – by the Act on the Provision of Information on the Environment and Environmental Protection, Social Participation in Environmental Protection and Environmental Impact Assessment of 3 October 2008, which implements the obligations imposed by EU directives (Ustawa z dnia 27 kwietnia 2001 r....; Ustawa z dnia 3 października 2008 r....).

## 5. CONCLUSIONS

The transformative breakthrough was the onset of improvements in supplementary regulations governing the inflow of DIF to Poland. It was influenced mainly by the development of market economy and Poland's application for EU membership. EU membership was associated with the adoption – in fundamental issues – of EU *acquis*, with certain exceptions covered by transition periods. One could wonder whether the haste accompanying the alignment of the Polish law to EU requirements did not result in the adoption of low-quality laws or whether the numerous regulations governing DFI are not too complex for investors. The author believes that the most controversial are tax regulations. Because of their complexity, they are interpreted differently by respective regional authorities. Because regional tax authorities are inconsistent and unpredictable in interpreting those regulations, tax planning is difficult for businesses. Consequently, the legislator should strive to ensure transparency of the tax system. Overall, the Polish law has been changing to the advantage of direct foreign investors in subsidiary issues, which does not mean to say that it is fully satisfactory to them. Not every legal detail must necessarily be subordinated to the EU legislation. Nonetheless, the law has been stabilised so that investors no longer have to adjust to changing conditions.

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## THE RELEVANCE OF CULTURE TO THE READING COMPREHENSION PROCESS: THE CASE OF MOROCCAN STUDENTS READING EFL TEXTS

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### **ABSTRACT**

*Most of what is communicated, be it written or spoken, is unsaid. The understanding of what is communicated is successful when people taking part in it are aware of the cultural values underlying language use. However, when readers draw from different cultural systems, their reading comprehension process is likely to fall prey to many pitfalls. The Present study seeks to highlight the crucial importance of the cultural component in what has come to be termed face-to-page interaction. The expression 'Face-to-page interaction' is used here as a short hand term to describe the process of reading comprehension and/or reading literary works (i.e., the interaction involving a reader and a piece of written discourse).*

**Keywords:** *Reading comprehension, face-to-page interaction, culture, communication, schemata*

### **1. INTRODUCTION**

Communication is essentially a matter of conveying meanings from the speaker to the listener using verbal and/or non-verbal symbols, oral, written, or visual modes, and through production and comprehension processes. It takes place in a socio-cultural context that not only poses constraints on appropriate language use but provides clues to correct interpretation as well (Canale (1983; Kreidler et al, 1988). Reading, the cognitive process of understanding a written message, is a method of communication to construct meaning. The success or failure of such a complex process, it is important to note, can be assessed by the extent to which the communicative acts are informative and communicative and the meanings communicated or intended to be communicated are well transmitted to the listener/reader. Besides, for any communication to be coherent and smooth, it must be the result of cooperative efforts where both participants recognize a common aim (Lyons, 1977; Giacomi et al, 1985; Leech, 1983).

### **2. PURPOSE OF THE STUDY**

The Present study seeks to highlight the importance of the cultural component in what many scholars call face-to-page interactions; that is, reading and appreciating English literary works, which has been widely regarded as the single most effective way of acquiring and maintaining a foreign language (Day and Bamford(1998) in Brian(2008). Culture is a set of common practices, ways of thinking and looking at things which make a number of people an entity. It is the way that helps them map the meaning of things around them and develop, in this way, distinct patterns of life, since experience differs from one group to another and from one individual to another. Kramsch (1998: 31-2) puts it clearly when he says that speakers from different cultural backgrounds may have "different interpretations of what it means to be true, relevant, brief, or clear with regard to conversations". The same opinion is noted in Hall (1997: 2) in Barker and Galasinski (2001: 3); he states that culture depends on its participants'



interpreting meaningfully what is happening around them, and making sense of the world in broadly similar ways. Culture, then, helps people develop a specific look at life around, and it is this common perception that makes of them an entity. Rocher (1968) adds the notion of learning explicitly. He states that culture is “a related whole of more or less formalized ways of thinking, feeling, and acting which, learnt and shared by a number of people, serve both objectively and symbolically, to make of those people a special, distinct collectivity”. Human understanding, it should be clear, is made possible when “interpretive processes between individuals are in close alignment or in approximation of one another” (Ting-Toomey, 1985:72). Intercultural misunderstandings or potential conflict, however, are the result of people’s using their own cultural values while communicating in another language.

### **3. LANGUAGE AND CULTURE**

Larrivé (2003) explicitly states that “cultures are not simple adornments any more than languages are mere tools of communication. Both tell individuals what the world is made of, and how to act upon it” (Larrivé, 2003: 197). Some scholars (Tannen, 1985; Dodderidge et al, 1984; Nadler et al, 1985; Smith, 1987) have made it clear that when participants in an interaction possess different cultural backgrounds, the success of their interaction is in danger. It would, then, be difficult to deny that to be able to communicate one needs to have linguistic knowledge coupled with cultural knowledge, familiarity and sensitivity. Underneath the taken-for-granted of everyday life, there is much that is problematic about the effect of culture on our verbal behaviour. What ensures communication success and smoothness in intra-cultural communication is that the rules of interpretation are somehow self-evident and logical, for the interactants draw from a common repertoire. In cross-cultural communication, however, the situation is like trying to follow “a route on which someone has turned the signposts around. The familiar signposts are there, but when you follow them, they take you in the wrong direction” ( Tannen 1985:5). Given that language is a means of communication and a symbol of group identity, it follows that it incarnates the culture of its particular speakers. Indeed, culture is “acquired, socially transmitted, and communicated in large by language” (Grosjean, 1982: 157). Malinowsky (1935: 51-2) and Firth (1957: 36) state that knowing a language involves much more than knowing just the structure or the meaning of the expressions, especially in the context of situation and context of culture. Fishman (1989) reduces the intricate relationship between language and culture to three major types:

First, “at any given point in time, every language indexes its associated culture more fully than others do. The distinctive conventions, concerns, values, and beliefs of any culture are more fully, easily and naturally expressed by its associated language than others. Even the most accomplished and elaborate languages are suddenly inelegant, imprecise, unnatural and finally even ludicrous when put to the unfair task of expressing the nuances of a culture which they have not been intimately identified” (Fishman, 1989: 469). In other words, there exist many cultural notions that cannot be expressed properly except through their associated language.

Second, Fishman (1989: 470) adds that “at any given point in time, every language symbolizes its associated culture more fully than others do”. The language in this sense represents and guarantees the existence of the culture. It is left to test whether there have been ways to secure the inter-generational, cultural continuity. Third, Fishman (1989: 471) believes that “at any given point in time, every language enacts its associated culture more fully than others do. A language not only indexes and symbolizes its associated culture but it is part and parcel of that culture.” From law and religion to songs, tales, riddles and every day greetings, every culture is ‘language specific’.

To get out of this dilemma, Bamgbose (1989), in Pütz (1994: 89-101), speaks about 'awareness' as opposed to a 'possession' of the culture of a second language. He believes that in terms of awareness, all bilinguals can be correctly said to be bicultural; but in terms of possession of the culture, not all bilinguals are bicultural. Romaine (1989: 20) believes that "the further one progresses in bilingual ability, the more important the bicultural element becomes, since higher proficiency increases the expectancy rate of sensitivity towards the cultural implication of language use."

#### **4. THE RELEVANCE OF CULTURE TO THE READING PROCESS: THE CASE OF LITERARY WORKS**

It, therefore, follows that the cultural component is a sine qua non for the success of the reading process. Language is directly affected by determining socio-cultural factors, and failure to take these factors into account often leads to ineffective language production and reception, or more precisely to what has come to be called communication breakdown. Given the intricate and close relationship between linguistic and cultural phenomena, it has become obvious that the socio-cultural context in which the language operates together with the underlying cultural values and assumptions strongly impact the encoding and decoding of communicative acts. La Forge (1983:4) states that participants in a communicative act «are never passive receivers merely absorbing events to sensation. What any event acquires in the way of meaning appears to reflect a transaction between what is there to be seen and heard and what the interpreter brings to it by way of response from past experience or prevailing motive. Thus, the attribution of meaning-the response-is always a creative process by which the raw data of sensation are transformed to fit the aims of the observer." In the light of the above statements, it is clear that a non-native interactant equipped with only grammatical knowledge will not be able to "decode the message while reading. Necessary as it may be, grammar, in the broad sense of the term, is not sufficient (Moraine, 1978; Smith, 1987; Beardsmore, 1982). Nuguchi (1987:15) shows that "Learning the strictly linguistic will not ensure that one will be able to [use, read] the language properly. As any language instructor can attest, in actual conversations, a non-native speaker may produce perfectly grammatical, yet widely inappropriate sentences. Even more distressing, a learner may sometimes know a sizeable amount of vocabulary and have a commendable grasp of linguistic rules and yet produce only silence." Language-based artistic creations are usually culturally-loaded; they are symbolic projections of the author's culturally and socially determined world view (Guerin et al, 1979; Smith, 1987). The status of culture in early studies of language in general, and studies of literature in particular was relegated to a secondary position,. The aim behind the teaching of literature was two-fold. First, literature was intended to reinforce language learning and to stimulate the learner's motivation through providing them with authentic instances of language use. Second, it was expected to teach the target culture. That is, to instill in students an understanding of the target culture. This is clearly stated by Povey (1972: 187), who writes that the 'traditional' belief has been that the teaching of a country's literature would "open up the culture of that country to the foreign student in a manner analogous to the extension of the native speaker's awareness of his own culture". However, cross-cultural research in the study of literature and reading comprehension (See Steffensen et al, 1984; Alderen et al, 1984, among others) has shown that it is futile to expect learners to absorb culture unconsciously from literature. Only when culture is already understood can literature be helpful because the aim of literature is not to directly teach culture but to provide further exposure to that culture, to illustrate the patterns of the target culture once these patterns have been already identified and explained (Croft, 1980; Stern, 1987). Understanding literary works, therefore, depends so much on the discernment and interpretation of the values inherent, but not necessarily explicitly expressed in the literary work under study. In literary works, as we have seen earlier, the values of any cultural group, even if the author's own values differ

from those to which they belong, underlie the plots and become the theme in virtually all the works of literature (Valdes, 1987). Clear understanding and full appreciation of literary writings cannot be ensured only by mastery of the grammar and vocabulary of the non-native language. Lado (1964: 151), for instance, notes that given the fact that literature is expressed through language, "one cannot understand it unless he understands the meanings of the culture expressed by the words of the language and unless the values and cultural experience against which the literature is written are also understood. One cannot jump from the structure of a language to its literature without passing through the basic cultural content of the language". The cultural content of a text tends to be more difficult to understand than its language, namely vocabulary, syntactic structures and the like. In this connection, Povey (1972:180) observes that "the whole area of a cultural comprehension is more likely than language problems to cause difficulty. This is aggravated by the fact that confusion shows up in such unexpected ways". The difficulty of comprehending can be explained in the light of the following assumptions developed within the framework of what might be classified as «interactive approaches to reading comprehensions" ( See Alderson et al, 1984; Carell, 1988; Devine et al, 1988; Iser, 1987). The first assumption is that reading is not a passive process; it does not merely refer to a process of decoding and reconstruction of the author's intended meaning through recognizing the units and words and building up a meaning for a text based on those units and words. Second, no text, be it literary or otherwise, has a meaning, but simply a potential for meaning and this potential varies from one reader to another. Moreover, experience has shown that different readers with more or less the same cognitive, social and cultural backgrounds may have different meanings of the same text. Further than this, the same one reader may develop different degrees of meaning and interpretation as he moves from the first impressionistic reading of a given text to a second, third and fourth reading of it. The construction of meaning is also a degree matter based on quantitative (how many times a text is read) and qualitative criteria (attention, carefulness, concentration) while one is reading a text. This partially explains why different readers may assign different meanings to the same text. Attention, therefore, should be directed towards the creative contribution of the reader; that is, the concern in the study of a text, as Iser (1987) states, should not be the text per se, but rather the activities involved in interacting with the text. The message is conveyed in two ways in the sense that the reader receives it and then decomposes and deconstructs it. The third assumption is that readers, as we have already pointed out, do not approach reading texts as 'naive blank-slate receptacles' ( Tannen, 1985; Spiro et al, 1980) or as " a cultural tabularaza" ( Robinson, 1985) who take in stimuli as they exist in some independent and/or objective way, but rather as experienced readers having prior experience. This knowledge, developed through the process of socialization, is used as a frame of reference against which they measure the events that occur before them. In other words, readers do already possess a "rich and complex network of schemata based on their own culture and their own language" (Floyd and Carell, 1987:105).

## **5. SCHEMA THEORY AND THE READING PROCESS: THE COMPROMISE**

Recent studies of reading comprehension have taken schema theory as their framework. Schemata represent abstract, cognitive frames, structures or scripts (Robinson, 1985; Markham et al, 1987; Spiro et al, 1980) which encapsulate generalized knowledge about objects, events in the world. In this respect, Markham et al, (1987:157) argue that "there are schemata representing our knowledge about all concepts: underlying objects, situations, events, actions and sequences of actions. As part of its specifications, a schema contains the network of interrelations believed to hold among the constituents of the concept in question". Each and every member of a language community possesses well-developed schemata relative to all the cultural activities held in their society, a fact which makes it easy for them to anticipate interpretations. It is thanks to the existence of schemata, which obviates the need for lengthy

explanations and fully-explicit messages, that people manage to take much for granted in their daily interactions and rely on the contribution of background knowledge. Messages, to be more precise are only partly verbalized, hence Hermann's (1982) idea of the "pars pro toto principle"; readers are expected to fill in from their prior background knowledge the missing or not spelled out parts of the message ( Loveday, 1982; Gumperz, 1982). This being the case, it necessarily follows that the availability of appropriate schemata is a sine qua non for comprehension. Problems of reading are usually ascribed to mismatches between the background knowledge presumed in a given text and that actually possessed by the reader. In other words, the more the reader and author's cultural backgrounds are similar, the more appropriate the interpretation and appreciation will be. Otherwise, readers will reinterpret vague aspects of the texts to conform to their own frame of reference and will, thus, miss the other interpretations which conform to the author's real schemata. In the absence of relevant background knowledge or schemata, Carell (1988) notes, readers adopt other strategies of interpretation, such as over relying on the textual input to construct the meaning, which is virtually impossible, in the sense that no text has all the necessary information for its comprehension. Also, readers who lack in the required schemata attempt to substitute the closest schema they possess and relate the incoming textual information to that schema, in which case there will be schema interference and misunderstanding. Problems of reading and understanding, as we have already stated, are usually ascribed to mismatches between the schemata in a given text and those possessed by the reader. Becker (2000: 298), invokes what he calls the Language paradox. He says reading "a text- distant in time and space, or conceptual world, is a utopian task, a task whose initial intention cannot be fulfilled in the development of its activity and which has to be satisfied with approximations essentially contradictory to the purpose which had started it". The activity of language is utopian in the sense that a person can never convey only what they want to convey simply because readers will interpret what they hear and their interpretations will, therefore, be both deficient and exuberant: deficient because it says less than it wishes to say and exuberant because it says more than it plans. Evidence supporting the importance of the cultural component in understanding literary works is given by a variety of empirical studies. Steffenson et al (1984), for example, demonstrated how an attempt to teach culture through literature proved not only ineffective but inefficient as well. Although the subjects could speak, read and write English well, they proved to be unable to understand and appreciate the literary works assigned to them. The teachers realized, then, that the literary works seemed to increase misunderstanding and confusion and subsequently felt that a cultural awareness was necessary to make the teaching of literature meaningful and more efficient. They devoted a considerable period of time to a "cultural orientation course" which included an explanation and discussion of the American cultural values in relation to the students' own values. As a result of this prior training, students succeeded in correctly answering questions and in responding appropriately. Steffenson et al (1986), as another example, also asked informants from India and the United States of America to read letters about an Indian wedding and an American wedding. When reading the native texts, neither of the groups found any significant problems in understanding the main ideas. When reading the foreign texts, however, more culturally inappropriate distortions occurred, presumably because the subjects relied on their own cultural background knowledge. Floyd and Carell (1987), for their part, conducted a similar study. The experiment was carried out with the aid of two groups, an experimental group and a control group. Half of each group received syntactically more complex versions of the test passages. The test passage was a typical Fourth of July celebration in Boston. One of the basic findings is that "implicit cultural knowledge presupposed by a text and the reader's own cultural background interact to make texts based on one's own culture easier to read and appreciate than syntactically and rhetorically equivalent texts based on less familiar, more distant cultures".(Floyd and Carell, 1987:90).

It is said that American literary writings are characterized by a certain uniqueness which perhaps derives partly from the influence of the central values defining the American character or "Adam" and which ultimately determines the way Americans view the world. Such central values are particularly self-reliance or extreme independence as well as some puritan beliefs, namely the autonomy of individuals, the importance of individual rights, self-pride and reverence of hard work. Some values also derive partly from the religious heritage of Christianity which affects to, a large extent, the background of Americans. (See Stewart (1972), Okabe (1984), Condo (1974), Nadler et al (1985) and Robertson (1987)). The uniqueness of Anglo-Saxon literature usually presents pitfalls to foreign readers and makes appreciation difficult to achieve for EFL readers not familiar with the underlying cultural values. Moroccan literary texts are no exception to this. They usually contain ideas based on the deeply-rooted cultural and religious convictions, making their understanding difficult not familiar with those values. According to Parker (1976:97), any "attempt to define 'Arab culture' must recognize Islam as its foundation. Even those who no longer observe all its tenets remain loyal to its basic concepts and give Islam its proper respect". Most Moroccans are no exception to this. They profess the religion of Islam; their verbal and nonverbal behaviour and thought patterns, accordingly derive from the Islamic doctrine and the Holy Koran.. A close observation of Moroccan people's oral and written language use will certainly show the role of Islamic religion in their daily life and in their personal relationships. Although the topics raised have nothing to do with religion, Moroccan participants constantly allude to God, or to words having something to do with religion. A logical question pertains to this constant reference to religion in Moroccan people's language use. Several explanations can be advanced to account for this. Some scholars (See Davies, 1987; Bentahila and Davies, 1989), for example, argue that this cannot be taken as a true reflection of people's personalities-that they are devotees of Islam- and the great use of religious words shows the ease with which God can be invoked. There may be some truth in this claim, but it is important to remember that Islam is a capital element in Moroccan people's culture, and it is, thus, part and parcel of their daily activities and interactions and is manifested through their values and assumptions. One of the basic values defining the Moroccan character is the tendency to refer to fatalism. Moroccan's conception of the relationship between God and man is special, and finds its origin in the Koran. In this connection, Parker (1976:97) writes that people's religious heritage goes far to explain their attitude of fatalism towards events in their life and in the society around. In their culture, God is revered as truly omnipotent and everything happens according to God's will. When something happens, whether or not a person is responsible for bringing it about, it is due to God, ancestors and other supernatural powers. If what happens to one is something good and desirable, it is interpreted as God's 'Grace' in response to one's good deeds. If, however, what happens is bad and undesirable, it is considered as a manifestation of God's 'wrath' and punishment in reaction to one's wrong doings and ignorance of God's directives (See Abu-Zahra, 1988). Success, for example, is not something that the individual is responsible for bringing about; instead, it is something that happens thanks to God's 'Grace' and parents' prayers. What Moroccan society stresses, as another value, is the 'sense of togetherness' or 'sense of community'. Moroccans allocate more importance to the group rather than the individuals (Phelan, 1982). Individual rights are relegated to a secondary or even a tertiary position. This is clearly reflected in the degree of closeness between members of the family and society and in the sort of mutual obligation they usually portray, although this may sometimes appear to be ideal. In the case of members of the family, there is a certain interdependence and closeness that is striking to foreigners. Family bonds or blood ties are very strong (See Westermarck, 1930; Fernea, 1972; Bentahila, 1983). The father's authority is still overwhelming to the extent that even his married sons and daughters cannot disobey him. Moreover, instead of the social security organisations in Western cultures, in Moroccan culture sons, daughters and brothers help their parents, their younger brothers and sisters for their

living, education and health care. Members of the family have a certain feeling of obligation and commitment as much on the moral level as on the material and financial level. On top of that, people give a high value to personal relationships, although at the expense of individual rights. A person may even sacrifice their own opinions to suit that of the others. In this connection, Parker (1976:98) notes that "personal relationships are extremely important. They observe the [Western] rush to experience everything and to acquire everything as laying waste to the truly important matters in life". Any behaviour not complying with these values is explained as a sign of shallowness and uncommittedness (Parker (1976:98).

## **6. DATA DESCRIPTION**

To support our claims, we resorted to some literary works with both Moroccan and English cultural loads. The texts with Moroccan cultural load are three tales translated into English and published as a collection entitled: M'HASHISH by Paul Bowles (1966). The texts with English cultural loads are extracts from two novels, namely *Seize The Day* by Saul Bellow (1956) and *The Red Badge of Courage* by Stephen Crane (1952). The cultural assumptions in these texts are subtle to readers having a different background. The focus was not on the texts as literary works per se, but as an expression of cultural values. The choice of the material is, thus, solely determined by the extent to which the literary text exhibits some cultural features which may be exploited by the present research.

## **7. RESPONDENTS**

The subjects are respondents consulted and interviewed orally to confirm or refute the predictions we have made on the basis of the categorization of the cultural values and principles of the Moroccan and the English communities as well as on the basis of our own intuitions. These respondents are twenty (20) native speakers of MA and eight (8) native speakers of English. The Moroccan respondents are male and female university students. The native speakers of English, on the other hand, are eight Americans (i.e., males and females), (Peace Corps volunteers and teachers at the American language centers (Mohammedia and Agadir).

## **8. METHODS AND PROCEDURES OF ANALYSIS**

First, we carried out a cultural value-based approach to the texts (Condon et al, 1974; Valdes, 1987) to identify the Moroccan and English cultural values which represent a potential for cross-cultural communication failure. We then discussed these excerpts with regard to the cultural values of each group in a bid to predict the type of understanding each cultural group would come up with; given their different cultural backgrounds. Moreover, those predictions were supplemented by the judgments of native speakers of both cultures gained through oral interviews. In the texts with the Moroccan context, for example, one can hardly fail to observe some of the cultural assumptions which, in their essence, derive directly or indirectly from Islamic religion and which readers with no Islamic background would either fail to understand or else would ignore as unimportant. In the case of the tale entitled "The Kif Patch", there is an underlying cultural value which is basic to Moroccans. This cultural assumption is that the good deeds of a man towards his neighbour, (i.e. sharing food with him) were enough to punish the neighbour for his betrayal. Out of jealousy, the neighbour wanted to destroy his neighbour's garden of cannabis lest he earns a lot of money from the crops. The owner of the garden, worried about his plants because he had seen a boar, prepared a trap (i.e. a bed of glass and of cactus spikes) to kill it. One day, while the neighbour was on his way to destroy his neighbour plants, he walked on the trap and fell onto the cactus spikes. The implication is that the man's good deeds, his bounty and generosity were at the root of the death of the neighbour, as is clearly expressed in the following extract: "The boar made it possible for him to kill the [evil neighbour] without any guilt. No one can foresee the plans of Allah. He murmured." (Bowles

1959:17). The above assumption is related to the notion of /tt3am/ (food), stipulating that, as Westermarck (1930:104) argues, "a common meal puts restraints on those who partake of it" since the food contains a conditional curse. Our English informants, not aware of the above value, came up with different explanations which fit their cultural value system. They ascribed the death of the neighbour to the influence of alcohol, drugs and carelessness. English writers, in turn, have certain uniqueness due to the influence of the central cultural values defining the Anglo-Saxon character and world view. EFL readers of English literary texts are often confused by or fail to pay attention to something the author intended to be capital because they approach these texts from different perspectives. In Bellow's (1956) *Seize the Day*, the concept of 'American dream', subsuming the values of independence and self-reliance, is clearly illustrated in the relationship between Tommy Wilhelm, the protagonist, and his father. Tommy Wilhelm suffers from a tremendous economic as well as psychological crisis. He expects help from his father, Dr. Adler, who, on the other hand, is 'indifferent' towards the pains of his son, as is shown below: "It made Wilhelm profoundly bitter that his father should speak to him with such a detachment about his welfare. Dr. Adler liked to appear affable. Affable! His own son, his one and only son, could not speak his mind or ease his heart to him. At least, Tamkin sympathizes with me and tries to give me a hand, whereas Dad does not want to be disturbed" (Bellow, 1956: 10-11). The idea conveyed in this extract was distorted by our MA native speakers. Relying on their own cultural backdrop, they condemned the father's behaviour vis-à-vis his only son. Although he was sufficiently rich to help his only son, he was selfish, inhuman and indifferent. Their interpretation of the father's behaviour was, of course, triggered by the cultural value that there should be mutual obligation between members of the society, let alone members of the same family. For the English native speakers, however, the father's behaviour expressed their sympathy and understanding of the father's behaviour rather than that of the son. In other words, types of behaviour such as that of Dr Adler are natural and legitimate in their culture because everybody is expected to ensure a respectable social position to live quietly. Failure to do this cannot be explained in terms of fate or other forces. Individuals are given equal opportunities to achieve success and prosperity and should seize these opportunities. However, if they fail, they are responsible for their failure and have to assume this responsibility (see Guerin et al, 1979; Condon, 1980). The second point is that the father's behaviour takes into account the revered values of self-reliance, self-respect and self-pride. In American Culture, as Valdes (1987), Nadler et al (1985) Okabe (1984) and Condon (1980) have stated, individuals want to preserve their feelings of 'self-worth'. Denial of this value is more offending than the hardships of life. The relationship between the father and his son in Bellow's (1956) novel represents an example of those types of behaviour which are open to culturally-biased interpretations. Both native speakers of MA and native Anglo-Saxons have learned to react in ways peculiar to their own culture; when they encounter a different set of values, they develop misconceptions and feelings of contempt for members of the other culture. The use of religious metaphors and images can also be problematic in cross-cultural face-to-page interactions. Because they belong to contrasting religious backgrounds, Moroccan EFL learners can hardly understand these religious metaphors. For example, Bellow (1956) describes how Tommy Wilhelm managed to find a way out of his psychological turmoil. His salvation is depicted in a religious and mystic way: "The source of all tears had suddenly sprung open within his, all deep, and hot, and they were pouring... The flowers and the lights fused ecstatically in Wilhelm's blind wet eyes; the heavy see-like music came up to his ears. It poured into him where he had hidden himself in the centre of a crowd by the great and happy oblivion of tears. He heard it and sank deeper than sorrow, through sobs and cries toward the consummation of his heart's ultimate need (Bellow, 1956: 117-118). As reported (Guerin et al, 1979), tears stand for water, in that they have a 'washing' function, as it were. Their washing is symbolic because they are believed to have washed Tommy Wilhelm's past. In fact, the flow

of tears is associated with an important Christian ritual (i.e., baptism); it is a total immersion in water and which has the function of christening a new born (Guerin et al, 1979). Although baptism is done for a baby with no past, the image invokes the essence of that very notion itself, which is used here in the sense of purification and redemption, a rebirth for Tommy Wilhelm, who is now without past and ready to accept society and meet its requirements. Our Moroccan respondents failed to see this analogy between tears and water in baptism. Even after having explained it to them, they mistook it for the seventh day after birth, in which the new born is given a name. This is, in effect, a distortion of the author's original meaning and implication. Stephen Crane's (1952) novel, *The Red Badge of Courage*, also uses religious allusions, especially when describing the death of one of the characters (Jim Conclin). The author describes this death in a ceremonial way, for he associates him with Jesus Christ. Just as Jesus Christ is considered the saviour, who died to rescue humanity according to Christian doctrine, so Jim Conclin, assumes the same role vis-à-vis Henry, the hero of the novel because he died to save him (Altens, 1976). Jim Conclin's death represents a turning point in Henry's life. Since Jim Conclin used to represent Henry's only source of love and comfort, his death weaned Henry of his dreams and illusions, and freed him of childish whims: "There was something rite-like in these movements of the doomed soldier. And there was resemblance in him to a devotee of a mad religion, blood-sucking, muscle wrenching, bone-crushing" (Crane, 1952:62). Crane's use of the term 'wafer' ("the red sun was pasted in the sky like a wafer"- (Crane, 1952: 54).), a small round piece of bread used in Holy communion, i.e., the taking of bread and wine to commemorate the last meal taken by Jesus Christ before his death, (Altena, 1976: 22 – 3; see also Guerin et al, 1979) also stresses the religiosity of the scene. When presented with these extracts, our Moroccan respondents were not able to see any religious image in it. In other words, although the images were very significant for the text, as indicated by Altena (1976) and Guerin et al (1979), they passed unnoticed for our Moroccan respondents. Based on the brief discussion above, it is clear that differences in values, whether qualitative or quantitative, really have a bearing on the way people use and interpret literary works. Since no two language communities have exactly the same value system, the language learning and teaching enterprise should be geared toward developing a considerable degree of awareness of the cultural framework and value system that influence language use. Problems in communication are engendered because participants have not acquired familiarity with the cultural norms of each other; "they may both create and receive quite unintended impressions if they attempt to use/ understand the target language according to the norms of their own culture" (Rivers, 1976: 2). The intrusion of the norms of a person's culture into a situation where the norms of another culture are expected impedes communication. Paulsten, Kiesting, and Ragel (2012: 14) speak about the key question of intercultural communication which is to "shift from ... inescapable notions of cultural differences to a focus on discourse where culture is actually made relevant and used as a communicative resource." Usually, people do not give proof of 'cultural awareness' through which they would succeed to avoid negative transfer from one language into another. Beardsmore (1982: 20) explains that "much of the friction across different linguistic communities arise out of situations where speakers of two languages have acquired two sets of linguistic patterns but then proceed to use the second set with the cultural values of the first." In the case of reading for instance we have the two linguistic patterns acquired; however, readers proceed to use the second language with the cultural values of the first, which results in problems of understanding.

## 9. CONCLUSION

Ignoring cultural background is at the heart of many misunderstandings and disagreements between members of different speech communities. Speakers leave those elements of talk that they presume to be shared knowledge unsaid. "The fate of the earth depends on cross cultural



communication.” Tannen (1986: 43) (See also Paulsten et al (2012) and (Brian, 2008). Until readers are willing to engage in appreciating the cultural values in the text, mediating between their own culture and the newly introduced traits through the text, they will never enjoy other human learning experiences.

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## **PANEL DATA ANALYSIS ON THE RELATIONSHIP BETWEEN REMITTANCES AND ECONOMIC GROWTH IN SUB-SAHARAN AFRICAN COUNTRIES**

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### **ABSTRACT**

*The main purpose of this study is to investigate the link between remittances and economic growth for 23 selected African countries by using panel data within 1985-2015 periods. In this study, we used the Panel Fixed/Random Effects model in order to investigate the relationship between personal remittances, gross fixed capital and GDP per capita variables. We also performed the panel cointegration test in order to examine the long-run cointegration between the variables. The panel fixed/random effects estimation results indicate that there is negative and significant relationship between remittances and economic growth. Louise & Clovis (2012), Deisting, et al. (2015), Chami, et al. (2003), Coiffard (2011) and Ahoure (2008) also found a negative effect of remittance on economic growth. In other hands, there is positive link between capital formation and economic growth. The panel cointegration result shows that there is significant long-run cointegration relationship between remittances and economic growth. In other word, this study found that remittances do not contribute to the development of these 23 African countries and suggest that government of each country must apply investment policies that can promote advantage to domestic labor and investors.*

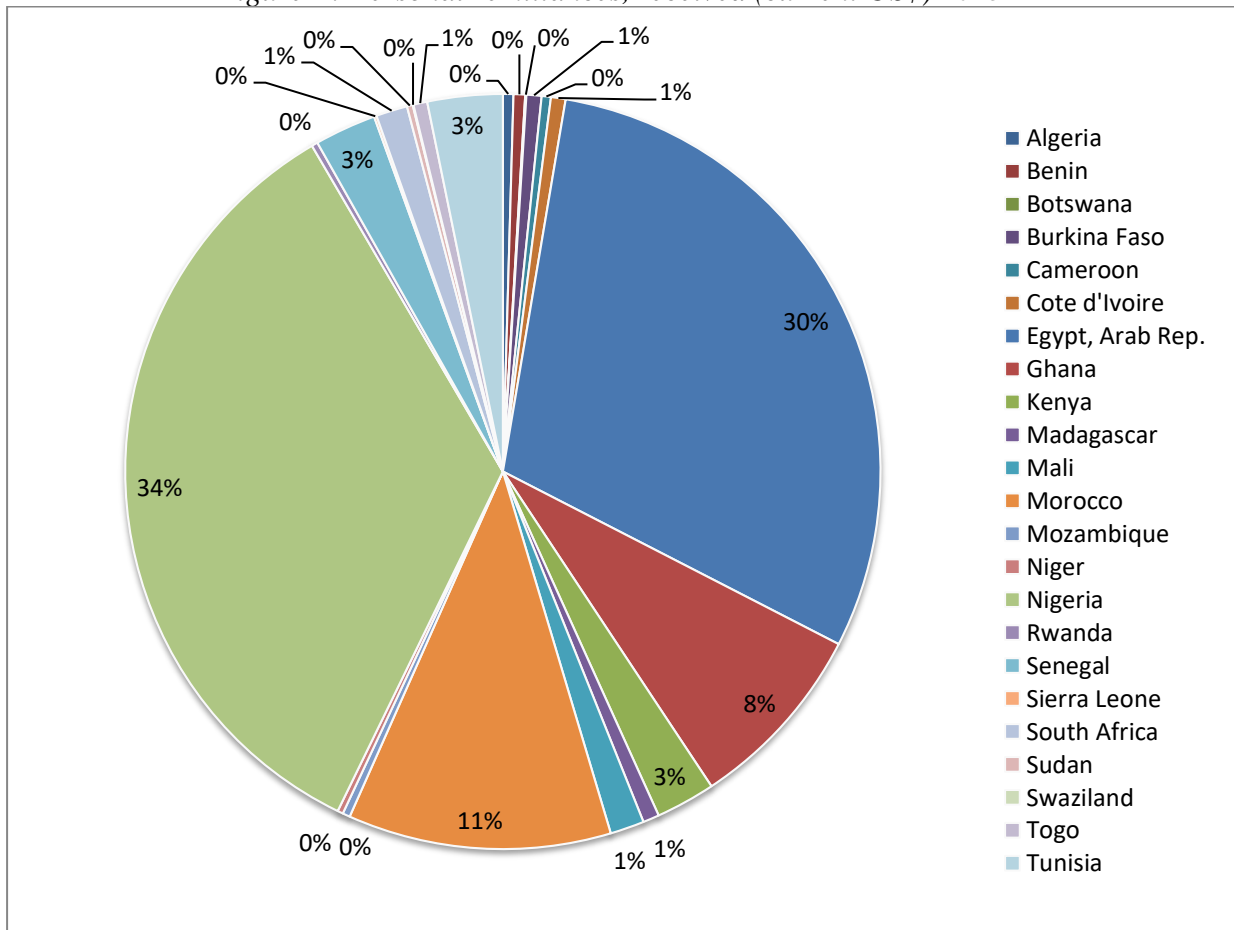
**Keywords:** *remittances, economic growth, Africa, panel data analysis*

### **1. INTRODUCTION**

In this world of globalization, as do goods and services, peoples also are moving from one point to another. According to newly available census data of 2013, more than 247 million people were living outside of their countries of birth. The migration of people is causing different phenomena (positive and negative) affecting the population balances and financial assets transfers. Migrant remittances are transfers of goods or financial assets made by migrants who live and work in another economy to the benefit of residents of their former country of residence. These funds cover personal transfers, compensation of employees and transfers of capital between households. Moreover, they constitute additional sources of financing economic development and thus help to overcome the liquidity constraints in the least developed countries. The importance of migration and its consequences push economist to investigate whether remittances are contributing to the development of economies.

In this context, several research was conducted to examine the relationship between remittances and economic growth. Despite the absence of a general theory of remittances, a Consensus seems to emerge on their reasons. Remittances have controversial effects on real monetary and financial variables. They directly or indirectly through consumption and investment (in education, health) stimulate economic growth. They can exert upward or downward pressure on price levels and on the real exchange rate. An increase in the overall demand generated by these funds leads to a rise in prices, which leads into an appreciation of the real exchange rate. In 2014, recorded remittances to developing countries would account about 436 billion dollars, an increase of approximately 4.4% compared to 2013. The total transfers, including to high-income countries, are expected to reach 583 billion dollars in 2014. Figure-1 shows the percentage share of countries by personal remittances received in 2015. According to Figure-1, in 2015, the biggest share was received by Nigeria (21 billion US\$), Egypt (18.3 Billion \$), Morocco (7 Billion \$), Ghana (5 Billion \$) and Tunisia (2 billion \$). Only Nigeria, which is the biggest economy of Africa in term of GDP and egypt (the 4<sup>rd</sup> economy in Africa) count the 64% of 23 countries' remittances with 39.3 billion \$ personal remittances received. Sixteen countries out of 23 have remittances less than 1 billion US\$ in 2015.

Figure-1: Personal remittances, received (current US\$) 2015



Source: (World Bank, 2017)

This study will use a panel data analyze in order to investigate the link between remittances and economic growth in 23 selected African countries. These countries were selected according to the availability of data and based on the geographic location as follow: 1 central African country (Cameroon), 3 East African countries (Kenya, Madagascar, Rwanda), 5 North African countries (Egypt, Arab Rep., Morocco, Tunisia, Algeria, Sudan), 4 South African countries (South

Africa, Mozambique, Botswana, Swaziland) and 10 West African countries (Nigeria, Ghana, Senegal, Mali, Burkina Faso, Cote d'Ivoire, Togo, Benin, Niger, Sierra Leone). In this context, our study will be structured as follow. The 2<sup>nd</sup> section will provide the literature review about remittance and economic development using a sorting table. In the third section, we provided the data and the method used. Empirical results were provided and commented in section 4 and we conclude in section 5.

## 2. LITERATURE REVIEW

In order to see the impact of remittances on development, economics are searching whether remittances contribute to economic growth or not via several studies. Lucas & Stark (1985) are one of contributor about remittances. According to them, under the self-interest hypothesis, the migrant sends money to his or her relatives either for reasons of aspiration to the family inheritance, investment in assets in his country of origin to enjoy the benefits in the period of inactivity, either expected return in terms of social prestige or obtaining political influence in his country. Some empirical studies indicate that remittances contribute to economic growth, by affecting positively the consumption, savings, or investment. However, some studies emphasize that remittances can appreciate the real exchange rate and therefore generate a resource allocation from the tradable to the non-tradable sector. In this context, we create a table that shows theses empirical studies by authors, variables, methods and findings. The table is sorted by nature of evidences (findings).

*Table-1: Literature review about relationship between remittances and economic growth by evidences (positive/negative) – Table continues through next three (3) pages*

Authors	Variables used – Countries/years	Methodology	Findings (evidences)
(Djajic, 1986)	Exchange between tradable and non-tradable goods	Theoretical model	Transfers improve economic growth
(Goschin, 2014)	gross fixed capital, foreign direct investments, GDP Real GDP per capita and remittances for 1995-2011	Panel estimation methods were employed to account for potential cross-section heterogeneity	The significant positive influence of remittances on both absolute and relative GDP growth
(León-Ledesma & Piracha, 2004)	investment-output ratio, Real GDP per capita, share of agriculture in GDP, foreign direct investment flows as a percentage of GDP, remittances for 1990-1999	Empirically analyse and GMM(the generalized method of moments) estimation methods	The remittances contribute significantly to the increase in productivity growth and entrepreneurial investment
(Lachaud, 2016)	Private transfers, Remittances for Ivory Coast in 1998-2003	Multinomial and linear logistic models, Spatial econometrics models,	significant relation between the decline of remittances from Ivory Coast and the rise of national poverty, especially transient poverty, during the same period

(Diagne & Diane, 2008)	Per capita household expenditure, The vector of explanatory variables and The term error	Simple linear function	Richer households are more affected by remittances. The poverty headcount and poverty gap are reduced in presence of remittance while the severity of poverty is worsened.
(Meyera & Shera, 2017)	GDP per capita, Worker Remittances Received, Gross Fixed Capital formation, Household final consumption expenditure Ratio of school enrollment, Current account Population growth, Real exchange rate, Government debt as a percentage of GDP, Albania, Bulgaria, Macedonia, Moldova, Romania and Bosnia Herzegovina 1999–2013	panel data study fixed and random effects model	remittances have a positive impact on growth
(Ango, 2015)	The ratio of GDP for remittances, The growth rate of GDP, consumption , Physical investment represented by the GDP ratio of the Gross fixed capital formation, The ratio to the GDP of the money supply, Ratio of imports to GDP and Real exchange rate for 1980-2011	VAR in panel data	Remittances have a positive and significant impact on the economic growth.
(Mim & Mabrouk, 2011)	Growth rate of GDP per capita, migrants' remittances in relation to GDP, matrix combining the traditional control variables of the growth and error term for 27 developing countries within 1999 - 2009	OLS model, Estimation method Robust to intra-individual heteroscedasticity and self-correlation and SGMM method.	Remittances have a positive and significant effect on economic growth and the remittances
(Gbenou, 2015)	Real GDP per capita, Net remittances of migrants, Bank credit to the economy in relation to GDP, Private consumption, Private Investment, The stock of human capital and The real effective exchange rate for 2003-2013	Panel vector error correction model (PVECM)	Remittances have a positive and significant effect on economic growth
(Fayissa & Nsiah, 2008)	GDP per capita, remittances per capita, gross fixed capital formation as a percent of real GDP, secondary school enrollment, 1994-2004	Panel Data, Fixed-Effects, Random-Effects	<i>Positive:</i> remittances boost growth in countries where the financial systems are less developed
(Baldé, 2009)	Real GDP per capita, Migrant remittances % GDP, Gross Fixed Capital Formation (% of GDP) and others for 1980–2004	Equations by (OLS), The generalized moments method estimator(GMM), and equation of inequality non-linearities,	Positive: Remittances and foreign aid positively and significantly influence savings and investment
(Ebeke & Goff, 2010)	Remittances, Public Consumption (% GDP), Real GDP, Inflation For 1970-2000	Theoretical model Inspired by Gonzalez-König, Econometric model(matrix), Equations by Ordinary least squares Technical(OLS),	Positive: Migrant remittances should have a positive effect on income inequality

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		Method of instrumental variables and Wodon, The generalized moments method estimator(GMM), and equation of inequality non-linearities,	
(Oshota & Badejo, 2014)	Real GDP, remittances, gross fixed capital,foreign direct investment, and exports and imports as a percentage of GDP for 1981- 2011	Cointegration methodology (Johansen) and Error correction equation model(Engle and Granger)	Positive: Affirmed the significant positive role of trade in promoting economic growth, suggesting that the more open the economy, the more stimuli it has on RGDP both in short run and long run
(Adams Jr. & Page, 2005)	Remittances, international migration, Per capita GDP, Per capita official international remittances, Gini index for 1990-2000	Econometrically estimate, basic growth–poverty model suggested by Ravallion(1997) and Rav allion and Chen(1997) Econometrically estimate, Ordinary least squares Technical(OLS) and Instrumental Variables(IV)	Positive: A 10% increase in international transfers per capita reduces the proportion of poor people by 3.5%
(Catrinescu, Leon-Ledesma, Piracha, & Quillin, 2006)	<b>GDP Per Capita, Remittances/GDP 1991-2003</b>	Dynamic Data Panel estimates, Cross Section Estimation OLS	Remittances have positive impact on long-term macroeconomic growth
(WorldBank, 2006)	remittances and other time series variables (Exchange-rate spread , Dual exchange rate , Stock of migrant ...) for 1995–2003	Standard model of general equilibrium	positive relationship between economic growth and remittance
(Ojapinwa, 2012)	Real GDP, population growth, population growth for 1977-2009	Mathematical equation	positive relationship between economic growth and remittance
(Salahuddin & Gow, 2015)	GDP per capita growth rate, remittances for 1977 – 2012.	Cross sectional dependence test	positive long run relationship between economic growth and remittance
(Elkhider, Bouhadi, & Kchirid, 2015)	Agricultural GDP, exchange rate , remittances for 1970-2006	Cointegration between endogenous and exogenous variable, Error Correction Model(ECM), Stability and Shocks Analysis, VAR in panel data system, Polynomial trend tests, Residue Normality Test in the System	Positive Long run relationship between and agricultural GDP



(Siddique, Shehzadi, Manzoor, & Majeed, 2016)	GDP per capita, Migration and Personal remittances, Gini index for 1980-2012	Panel depends upon a six cross sections, panel estimation technique, Fixed effect model (FEM), and Random effect model	Positive impacts on poverty reduction. The contribution of foreign remittances in the total income of South Asia is 4.2% which shows a significant proportion of GDP and it has significant impact on poverty alleviation.
(Louise & Clovis, 2012)	GDP per capita growth rate, remittances for 1994-2009.	fixed effects panel regression models regression models	Remittances inflows do not contribute significantly to the reduction of poverty.
(Deisting, Fontan, & Makhlof, 2015)	Trade (% GDP), Physical capital (% GDP), Inflation, remittances, Human capital, Domestic credit from the banking sector, and Political stability for fourth trimester 2013 and 2014	Equations by Ordinary least squares Technical(OLS)	Remittances have a significant negative correlation with the receiving countries' economic progress. Besides, this relationship is contingent upon the political stability the country enjoys.
(Chami, Fullenkamp, & Jahjah, 2003)	Real GDP per capita, investment to GDP ratio, and remittances for 1970 – 1998	Standard cross-section for Panel estimation methods on large sample of countries.	Remittances do have a negative effect on economic growth
(Coiffard, 2011)	GDP per capita growth rate, remittances for 1980 -2009, import, export	VAR (Vector Auto Régressive) in panel data .Heterogeneous panel, used for empirical estimation	Negative relationship between economic growth and remittance
(Ahoure, 2008)	GDP per capita growth rate , remittances for 2002-2006	Estimates using Blundell and Blond's dynamic panel method	Negative effect of remittance on the evolution of GDP per capita growth

### 3. DATA AND METHODOLOGY

#### 3.1. Data specifications

Since the aim of our study is to investigate the link between remittances and economic growth for 23 selected African countries, we used GDP per capita as dependent variable, personal remittances percentage of GDP and Gross Fixed Capital Formation percentage of GDP as independent variables. The data of 23 selected African countries covering the 1985-2015 periods was bulk from World Development Indicator database. The descriptive statistics of these data are giving as follow:

*Table following on the next page*

Table-2: Descriptive Statistics of used Variables (common statistics)

	GDP per capita	personal remittances % of GDP (PR)	Gross Fixed Capital Formation % of GDP (GFCF)
Mean	1655.264	2.839869	19.13635
Median	963.3825	1.993583	18.77495
Maximum	7610.726	15.75131	43.14984
Minimum	130.4367	0.003560	-2.424358
Std. Dev.	1656.851	2.916734	6.912090
Skewness	1.710240	1.543697	0.422808
Kurtosis	5.354219	5.312451	3.402600
Jarque-Bera	512.2319	442.0430	26.05879
Probability	0.000000	0.000000	0.000002
Sum	1180204.	2024.826	13644.21
Sum Sq. Dev.	1.95E+09	6057.224	34017.21
Observations	713	713	713

### 3.2. Methodology

This study used the panel data regression (random/fixed effects) model, the Panel cointegration and Panel Causality test to investigate the link between remittances and economic growth. The following equation was estimated for each country using Panel Least Squares model.

$$\Delta GDP_{it} = \alpha_0 + \beta_1 PR_{it} + \beta_2 GFCF_{it}$$

Where,

**GDP** = GDP per capita

**PR** = personal remittances percentage of GDP

**GFCF** = Gross Fixed Capital Formation percentage of GDP

$\beta_1$  and  $\beta_2 \neq 0$

The Panel Least squares model has three types of regressions: Pooled regression, Fixed effects regression and Random regression. The first one does not distinguish between the cross-section countries. That is mean denying the heterogeneity and individuality that may exist between the pooled countries and it is assumed that the coefficients are the same fo all individuals. The fixed effects or LSDV model allows heterogeneity and individuality among countries by allowing to have their own intercept value. Fixed effect means that although the intercept may differ across countries, intercept does not vary over time. However, in the random model the countries have a common mean value for intercept. In order to decide which model is appropriate, Hausman test must be used. In this study we performed also the Engle & Granger (1987) two step residual based Kao test which follows the same basic approach as the Pedroni tests, but specifies cross-section specific intercepts and homogeneous coefficients on the first-stage regressors. In Kao (1999), we have two tests under the null hypothesis of no panel cointegration; Dickey Fuller type test and Augmented Dickey Fuller type test. Kao shows two types of specification For the Dickey Fuller type test. Then in the bivariate case, Kao assumed the following model

$$y_{it} = \alpha_i + \beta x_{it} + e_{it}$$

for

$$t = 1, \dots, T, \quad i = 1, \dots, N$$

Where

$$y_{it} = y_{it-1} + u_{i,t}$$

$$x_{it} = x_{it-1} + \epsilon_{i,t}$$

We in order to run the first stage regression,  $\alpha_i$  have to be heterogeneous,  $\beta_i$  have to be homogeneous across cross-sections, and all of the trend coefficients  $\gamma_i$  must be set to zero. Then we could run the pooled auxiliary regression,

$$e_{it} = \rho e_{it-1} + v_{it}$$

or the augmented version of the pooled specification,

Kao indicates the statistics below under the null of no cointegration,

$$DF_{\rho} = \frac{T\sqrt{N}(\hat{\rho} - 1) + 3\sqrt{N}}{\sqrt{10.2}}$$

$$DF_t = \sqrt{1.25}t_{\rho} + \sqrt{1.875N}$$

$$DF_{\rho}^* = \frac{\sqrt{N}T(\hat{\rho} - 1) + 3\sqrt{N}\hat{\sigma}_v^2/\hat{\sigma}_{0v}^2}{\sqrt{3 + 36\hat{\sigma}_v^4/(5\hat{\sigma}_{0v}^4)}}$$

$$DF_t^* = \frac{t_{\rho} + \sqrt{6N}\hat{\sigma}_v/(2\hat{\sigma}_{0v})}{\sqrt{\hat{\sigma}_{0v}^2/(2\hat{\sigma}_v^2) + 3\hat{\sigma}_v^2/(10\hat{\sigma}_{0v}^2)}}$$

and for  $p > 0$  (i.e. the augmented version),

$$ADF = \frac{t_{\rho} + \sqrt{6N}\hat{\sigma}_v/(2\hat{\sigma}_{0v})}{\sqrt{\hat{\sigma}_{0v}^2/(2\hat{\sigma}_v^2) + 3\hat{\sigma}_v^2/(10\hat{\sigma}_{0v}^2)}}$$

converge to  $N(0, 1)$  asymptotically, where the estimated variance is  $\hat{\sigma}_v^2 = \hat{\sigma}_u^2 - \hat{\sigma}_{u\epsilon}^2\sigma_{\epsilon}^{-2}$  with estimated long run variance  $\hat{\sigma}_{0v}^2 = \hat{\sigma}_{0u}^2 - \hat{\sigma}_{0u\epsilon}^2\sigma_{0\epsilon}^{-2}$ .

The covariance of

$$w_{it} = \begin{bmatrix} u_{it} \\ \epsilon_{it} \end{bmatrix}$$

is estimated as

$$\hat{\Sigma} = \begin{bmatrix} \hat{\sigma}_u^2 & \hat{\sigma}_{u\epsilon} \\ \hat{\sigma}_{u\epsilon} & \hat{\sigma}_{\epsilon}^2 \end{bmatrix} = \frac{1}{NT} \sum_{i=1}^N \sum_{t=1}^T \hat{w}_{it} \hat{w}_{it}'$$

and the long run covariance is estimated using the usual kernel estimator

where  $\kappa$  is one of the supported kernel functions and  $b$  is the bandwidth (EViews, 2017).

## 4. EMPIRICAL RESULTS

### 4.1. Unit Root Test Results

Before estimating the model, we will perform the Panel unit root, which consists to test whether the variables are stationary, or not. Our data must be stationary for us to perform the cointegration and causality test. Recent research indicates that panel unit root test has more power than individual unit root test, that is why we will use three tests to investigate the stationarity of our variables. In this study, we used Levin, Lin and Chu (2002) – LLC and Fisher-type tests using ADF and PP tests (Maddala and Wu (1999) and Choi (2001)). The Levin, Lin and Chu, Augmented Dickey-Fuller (ADF) and Fisher-PP tests were performed in level and the results are given in Table-3.

Table-3: Unit root test results

Level							Decision
Intercept							
	LLC		ADF		PP		
Variables	Statistics	Prob.	Statistics	Prob.	Statistics	Prob.	
GDP	6.8	1	21.2	0.9	19.3	0.98	Non-stationary
PR	-0.33	0.37	43.65	0.57	44.8	0.52	Non-stationary
GFCF	0.11	0.54	63.3	0.05	53.6	0.2	Non-stationary
Trend & intercept							
	LLC		ADF		PP		
Variables	Statistics	Prob.	Statistics	Prob.	Statistics	Prob.	
GDP	1.6	0.9	45.7	0.48	32.4	0.9	Non-stationary
PR	2	0.9	52.7	0.2	45.2	0.5	Non-stationary
GFCF	-1.45	0.07	76.9	0.0029	49.43	0.3	Non-stationary
1 <sup>ST</sup> Difference							
Intercept							
	LLC		ADF		PP		
Variables	Statistics	Prob.*	Statistics	Prob.*	Statistics	Prob.*	
DGDP	-8.4	0.00	253.7	0.00	324.233	0.00	Stationary
DPR	-10.9	0.00	274.3	0.00	453	0.00	Stationary
DGFCF	-16.2	0.00	358.3	0.00	456.6	0.00	Stationary
Trend & intercept							
	LLC		ADF		PP		
Variables	Statistics	Prob.*	Statistics	Prob.*	Statistics	Prob.*	
DGDP	-9.44	0.00	333.3	0.00	614.5	0.00	Stationary
DPR	-10.4	0.00	239.7	0.00	1285.3	0.00	Stationary
DGFCF	-9.3	0.00	264.7	0.00	1063.2	0.00	Stationary

\*Indicates the rejection of Null Hypothesis, meaning that the variables are stationary

The Null Hypothesis is “There is Unit Root”, alternative Hypothesis in turn is “There is no unit root”. According to Table-3, the variables are not stationary in level. However, the second test indicates the rejection of null hypothesis, which means that our variables are stationary in first difference.

#### 4.2. Panel Regression Model Estimation

The panel regression model was estimated with Fixed/Random effects model and the model estimation is given in Table-4. However, in order to choose the appropriate model we performed the Hausman test which the Null Hypothesis is “Random Effects”.

Table-4: Fixed/Random effects model Estimation

Variable s	Fixed Effect Model				Random Effect Model			
	Coefficient s	Std. Error r	t-Statistic c	Prob .	Coefficient s	Std. Error r	t-Statistic c	Prob .
C	1425.51	64.25	22.19	0.000	1419.818	315.36	4.5	0.000
PR	-31.07	7.9	-3.93	0.000	-31.37	7.9	-3.97	0.000
GFCF	16.62	3.22	5.16	0.000	16.96	3.21	5.27	0.000
R-Squared	93.3%*				5%			
Hausman Test					7%*			

According to Table-4, all the variables are significant in 5% level. The result of Hausman test indicates the rejection of null hypothesis in 10% level, meaning that we can choose the Fixed effects model at 10% significance level, because also the R-squared is very high. The equation of Fixed effects is given as follow:

$$GDP = -31.07PR + 16.62GFCF + 1425.51$$

According to this equation, 1 unit increase in GDP leads to 31 decrease in remittances. In other words, there is negative and significant relationship between Remittances and economic growth. However, Capital formation is affecting the economic growth positively.

#### 4.3. Cointegration Test

The results of Kao Residual Cointegration Test are giving in Table-5. The null hypothesis of this test is that “there is no cointegration”.

Table-5: Cointegration test result

ADF		t-Statistic	Prob.	
		1.662393	0.0482	
Residual variance		6990.968		
HAC variance		15302.49		
H <sub>0</sub> : Null Hypothesis: No cointegration				
<b>Augmented Dickey-Fuller Test Equation</b>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID(-1)	-0.025222	0.012104	-2.083755	0.0376
D(RESID(-1))	0.167828	0.044124	3.803578	0.0002
D(RESID(-2))	0.047064	0.043304	1.086840	0.2776
D(RESID(-3))	0.107046	0.043728	2.447976	0.0147
D(RESID(-4))	0.054857	0.043824	1.251749	0.2112
D(RESID(-5))	0.134595	0.044091	3.052644	0.0024
D(RESID(-6))	0.149425	0.044987	3.321503	0.0010

According to the residual variance and ADF test equation in Table-5, the probability value is less than 5%, which mean the rejection of null hypothesis. Thus, there is cointegration link between the variables (personal remittances, GDP and Gross Fixed Capital formation. Therefore long-run relationship exist between them.

## 5. CONCLUSION

Several phenomena in the causes the migration of people from one point to another, especially in this century of globalization. The migrants will work and send their goods or funds called "remittances to their home country. That is why researcher started to investigate whether remittances contribute to economic growth or not. In this context we investigated the link between remittances and economic growth for 23 selected African countries by using panel data within 1985-2015 periods. In this study, we used personal remittances, gross fixed capital and GDP per capita variables to form an equation that we estimated using the Panel Fixed/Random Effects model in order to investigate the relationship between the variables. We also performed the panel cointegration in order to examine the long-run cointegration links between the variables. The panel fixed/random effects estimation results indicate that there is negative and significant relationship between remittances and economic growth. Louise & Clovis (2012), Deisting, et al. (2015), Chami, et al. (2003), Coiffard (2011) and Ahoure (2008) also found a negative effect of remittance on economic growth. In other hands, there is positive link between capital formation and economic growth. The panel cointegration result shows that there is significant long-run cointegration relationship between remittances and economic growth. In other word, this study found that remittances do not contribute to the development of these 23 African countries and suggest that government of each country must apply investment policies that can promote advantage to domestic labor and investors.

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## UNRAVELING THE BIG BANG: A COMPARATIVE ANALYSIS OF BANKING AND FINANCIAL RESTRUCTURING IN JAPAN AND KOREA

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### **ABSTRACT**

*Recently, Japan has increasingly been attracting the attention of many political economists, especially in regards to its long-term recession. Korea was also the focus of attention by such scholars when it underwent the currency crisis in 1997. Moreover, these analyses of the political economy of Korea and Japan have so far been concentrated on changes in their industrial policies and government-business relationships. Particularly, the studies on both countries so far have been on what kinds of industrial policies and regulations the governments have promoted when companies advanced into new markets. However, given the current restructuring drives in both countries, research efforts should now be expanded to cover the relationships established among economic participants when financial and non-financial institutions are forced out of the market through the restructuring process. Therefore, this study examines institutional changes during the process of a "Big Bang", or banking and financial sector restructuring, thereby reconstructing the relationship between government and market. A big bang refers to a radical change in a banking and financial system, which accelerates market-led financial sector reform. Its objective is liberalization of the financial sector and financial market opening. In fact, Korea and Japan have been establishing new reform-related systems as a means to break out of their current economic situations. The big bang-type reform measures that have been implemented in Korea and Japan could therefore be seen as the first step in the break-up of the East Asian developmental state model. The purpose and contents of big bangs, or banking and financial restructuring, are similar among countries. However, their progresses are different. If examined closely, it can be seen that even East Asian countries show huge differences in the process of their big bangs. This is true to cases of Japan and Korea. In Japan, banking and financial restructuring has been showing weak progress, and bad loans are on a continual increase. By contrast, Korea has promoted ample restructuring, and was able to dispose of its bad loans sooner and more than expected. Why does the disparity in performance between the two nations exist? In order to answer this question, this study compares the roles and structures of the main banks of both countries, and analyzes how the differences between them affected the big bang and banking and financial restructuring of these countries. Consequently, this thesis will claim that although a big bang process is a drastic reform measure based on market principles, its effectiveness will depend upon the strong role of the government involved.*

**Keywords:** *banking, financial restructuring, Japan, Korea*

### **1. BIG BANGS AND INSTITUTIONAL CHANGE: AN OVERVIEW**

#### **1.1. Japan: a big bang as the completion of deregulation**

The big bang in Japan was triggered by the long-term economic recession in the 1990s, continued deregulation efforts by the government, and the growing crisis in the banking sector. In Japan, the 1990s began with a sharp deceleration in economic growth, especially between 1990 and 1994. The average annual growth rate of real GDP was 1.5%, compared to the average

of 5.5% during the previous four years from 1986-1989. Land prices dropped by 3-5% each year from 1992 to 1999. With the falling prices, many property-related loans extended by banks turned sour. As the economy stagnated, non-performing loans increased further. In turn, the financial sector deregulation by the government was accelerated. However, not only did the deregulation efforts fail to bring about changes in banks' lending pattern, the profitability of banks also continued to deteriorate. Eventually, a full-scale crisis in the Japanese banking sector broke out with the bankruptcy of Sanyo Securities and Hokkaido Takushoku Bank in 1997. The momentum for deregulation reached its peak when the economy showed some signs of recovery in 1996. In a move perhaps aimed at displaying leadership and confidence that the financial problems were receding, Prime Minister Ryutaro Hashimoto announced plans in late 1996 to complete the deregulation of the nation's financial system by 2001. The plan later became known as the "Japanese big bang," a reference to the term applied to the 1986 deregulation of the London financial markets. Economic as well as political reasons were behind the declaration by the Hashimoto administration. First, by publicizing the impending big bang on an international scale, the government could suppress parties opposing to deregulation in the nation. Second, the Japanese government's declaration helped it in international negotiations. At the time, the U.S. had been pressuring Japan to open up its insurance market, with the aim of dominating the Japanese insurance market. As a result, the US opposed the deregulation of that market. The announcement of the big bang basically established a deadline for allowing such vested interests (Takatoshi Ito and Michael Melvin. 2001, 165). Third, the Ministry of Finance, which has been suffering from harsh public criticism due to the corruption scandals of high-ranking officials, actively cooperated in the process, wishing to regain public favor. The Japanese government summarized the spirit of its big bang reform as "Fair, Free, and Global." The reasons for its implementation were: 1) the better use of the 1,200 trillion yen in personal savings in Japan, and 2) the prevention of the "hollowing out" of the Tokyo financial market. However, clearly, the main objectives of the big bang were to make the Japanese financial markets more competitive and to provide financial institutions with more opportunities to compete freely for business. Making Japanese financial markets more attractive so that the yen could become a major international currency, and so that Tokyo could become a truly global financial center, was also an important aim of the big bang (Takeo Hoshi and Anil Kashyap 2001, 289). As <table 1> shows, the key elements of the big bang were as follows: the expansion of the range of instruments available to investors and of the options in corporate fund-raising, the allowance for financial institutions to provide a wider variety of services, the creation of an efficient and fair market, and the improvement of the stability of the nation's financial system. For example, the foreign exchange controls were effectively eliminated on April 1, 1998. And restrictions that had separated the banking, securities, and insurance sectors were completely lifted by April 2001. The big bang eliminated the sources of various problems, created by earlier incomplete deregulation efforts, which had been an important part of the financial crisis. These new activities finally and formally concluded the process of financial deregulation in Japan.

## **1.2. Korea: a big bang after the 1997 currency crisis**

The Korean "big bang" in the banking and financial sectors was triggered by the 1997 currency crisis and the resulting IMF bailout. Although deregulation in the financial sector had been executed continuously since the 1980s, it was only with the introduction of the IMF reform program that the nation earnestly started to transform its financial system from a heavily regulated, bank-centered system to a liberalized, market-based economy. The Korean big bang program in the financial sector, which had been agreed upon by the Korean government and the IMF, was revised 11 times. But the basic spirit of the program was reflected in the early agreements. In those early versions, conditions from the IMF included the shutdown and restructuring of undercapitalized financial institutions to encourage the abolition of banks' bad

loans, the enhancement of the soundness of financial institutions, and the inspection of large financial institutions by internationally-recognized accounting firms. The IMF forced Korea to complete these reform measures as soon as possible. The Korean government signaled the beginning of restructuring by shutting down 14 insolvent merchant banks and two securities firms. This was aimed at recovering the international financial confidence of the nation by showing a strong determination for restructuring. Then, the focus of banking and financial restructuring moved from 'securing of foreign exchange liquidity' to 'disposal of undercapitalized financial institutions,' in April, 1998, when the government's foreign exchange stabilization bonds were successfully issued overseas. In June 1998, Korean government shut down five undercapitalized commercial banks. In July 2000, under the agreement between government and Korean Financial Industry Union, it was decided that banking sector restructuring would be enforced again under the initiative of the government. In early October, the government announced a plan to inject an additional 50 trillion won of public funds to clean up the bad-loans in financial sector (SERI 2001, 114-115). The IMF required strong financial sector reform by the Korean government, and Korea complied with those demands sincerely. It may even be said that, under the new liberalism policy, the Korean government promoted a higher degree of reform than that the IMF had requested. As can be seen in <table 2>, it is generally considered that banking and financial sector restructuring in Korea was promptly enforced, led by the Korean government and the requirements of the IMF (Ahn 2001). The purpose of the Korean big bang was to solve in the short-term the problems that had accumulated in the nation's financial market during the past growth era. In other words, its object was to enhance the transparency and competitiveness of the banking and financial market by doing away with government intervention. And, being aware that the bad loans of the financial sector could not be disposed of unless drastic short-term financial market reform was in effect, Korea simultaneously pushed the disposal of bad loans and financial market reform.

## **2. THE TRANSFORMATION OF THE MAIN BANK AFTER THE BIG BANG**

### **2.1. Japan: the deterioration of the Main Bank System**

As aforementioned, the bubble burst of the Japanese economy and the long-term low growth triggered the implementation of a big bang in Japan. However, with financial institutions selling off the cross-holding shares they held in companies and banks they dealt with, in order to dispose of bad loans, the main bank system of Japan was weakened. The term, main bank system, refers to a system in which a main bank inspects, supervises, and regulates the management situation of individual companies. Three characteristics of the main bank system can be cited. First, banks and companies can share information as they build long-term relationships based on their cross-share holding, thereby lowering the capital costs of the company and eventually facilitating long-term facilities investment. Second, the main bank plays the role of a delegated monitor of other financial institutions, and in return, it can get cooperative loans tacitly from these financial institutions. As for the financial institutions, they can lower their supervision costs by entrusting monitoring to the main bank. Third, the main bank becomes a stable shareholder of the company and also plays the role of a provider of the last resort when these companies' operating performances deteriorate, thereby allowing them long-term stability<sup>1[1]</sup>. The main bank system of Japan has its origin in the "Designated Financial Institutions System for Munition Companies", which was established in 1944 to streamline the supply of funds for weapons production. The contents of the system are as

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<sup>1[1]</sup>. Masahiko Aoki, Hugh Patrick, Paul Sheard stylized the characterization of the main bank system as (1) a nexus of main bank-firm relationships, (2) the delegation of reciprocal monitoring arrangements among main banks, (3) discretionary regulatory relationships (Masahiko Aoki and Hugh Patrick 1994, 35).

follows: one or two banks are designated as the managing bank(s) of each weapons-manufacturing company, and they raise funds that the company needs in the form of a syndicated loan. For the concerned companies, they can create an account only at their designated bank(s). Taking a closer look at the history of the Japanese main bank system, the source of funding for companies in Japan after World War II was through bank loans, with the Ministry of Finance in support. That is, the Ministry of Finance maintained a financial measure called the "convoy system," which prevented banks from going bankrupt. Through the system, the ministry raised the entry barriers to the financial industry, maintained low interest rate levels, and restrained the development of the bond market, thereby helping the operation of main banks. This system worked well in the nation's high growth era and during the two oil shocks, and made possible long-term, large-scale investments by companies. Then, why did such a well-operating system weaken? If the inspection function of the main bank system had been well-maintained, large-scale bad loans would not have occurred. In fact, there are currently many disputes regarding the Japanese economy and the main bank system. Supporters of the system claim that the main banking system failed to adapt to the changing global economic environment, thereby leading to the current economic recession of Japan (Masahiko Aoki and Hugh Patrick 1994). Its detractors insist that the current situation in Japan resulted from the continued wrong function of the main banking system rather than the system itself (B. Hall and D. Weinstein. 2000). That is, they claim that over-investment problems were raised and the bubble burst because of the continued presence of this system, as a result of which restructuring could not be promoted in a prompt manner. There is also a third view that the mostly commonly-held one that the main bank system itself forms the root of the Japanese economy is a misunderstanding, and that the Japanese economy is originally market-led, rather than government-led or bank-led (Yoshihiro Miya and Mark Ramseyer, 2001). The main bank system started to weaken in the 1980s, when financial market liberalization and changes in corporate finance were being developed. With market liberalization and deregulation being the global trends, supervision by the Ministry of Finance over domestic banks was eased. Moreover, affected by the globalization of world financial markets, large companies in Japan started to aggressively utilize direct financing methods both domestically and abroad. For instance, all regulations related to companies' issuance of bonds were abolished in 1996. However, these changes themselves posed a big challenge to the main bank system. Healthy companies started to desert banks. Companies with low profitability and a high risk of bankruptcy turned to indirect financing through main banks, while those with high profitability and a low chance of bankruptcy turned to direct financing (Sohn 2001). Even before the promotion of the big bang, banks had lost most of the largest firms to the markets (Takeo hoshi and Anil Kashyap 2002, 312). Although this did not mean an immediate collapse of the main bank system, it certainly contributed to its weakening. Consequently, the big bang in the Japanese financial sector accelerated the weakening of the main bank system. The role of the main bank as a designated monitor was reduced as banks and other financial institutions inspected or supervised the companies they dealt with on their own<sup>2[2]</sup>. Moreover, the cross-shareholding relationships were reduced, although not completely broken off, which also contributed to the deterioration of main banks' position as a stable shareholder. With the increase in direct financing activities of companies, banks sold the shares of healthy companies to the market. A number of factors have contributed to the unwinding of cross-shareholding, including the recognition of shareholding risk due to the introduction of market-to-market accounting, the review of non-operating assets to improve capital efficiency, and the declining importance placed on shareholding due to the changing nature of corporate relationships. Another factor

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<sup>2[2]</sup>. The inspection department and the operations department, which were two independent departments, were unified into one, resulting in the weakening of the main bank system.

that will significantly affect the progress of unwinding is a measure currently being debated to restrict the shareholdings of banks (a gross restriction on the amount of shareholdings of banks, so as not to exceed shareholder's equity). Under pressure to dispose of bad loans and to boost shareholder's equity, major banks already have exceeded the restricted amount (their shareholdings were 1.6 times shareholders' equity as of the end of fiscal year 2000), and need to choose which cross-shareholdings to keep and which to sell off (Fumiaki Kuroki 2001, 33). This is because banks had to sell off their shares as the hidden profit (*Fukumi Eki*) of the shares declined rapidly due to the economic recession and the fall in stock prices. In fact, the total amount of shares disposed of by 16 Japanese banks totaled 2,581.7 billion yen and 1,575.7 billion yen in 1999 and in the first half of 2001, respectively (*Toyo Keizai*, June 2, 2001). The long-term shareholding ratio, in terms of value, in total shareholding was 33% in 2000, declining from the 45.58% recorded in 1991. In particular, the decline was accelerated after 1996 when the big bang started (Fumiaki Kuroki 2001, 28). And the falling trend will likely continue for a while. Then, arises the issue of the relationship between the weakened role of the main bank system and the reduction of cross-shareholding, given the delay in restructuring and the disposal of bad loans in the financial sector. Considering the situation of the Japanese stock market, which suggests that the current cross-shareholding-related problems cannot be solved in the short-term as the massive sell-off of stocks is impossible, there is little possibility that a new stock market-led corporate governance structure may arise. The ratio of total cross-shareholding is currently at the 30% level. This cross-shareholding makes the relations between companies and its shareholders vague, and distorts the movement of funds. This in turn, brings about instability in the stock market, thereby reducing the effectiveness of the big bang. Especially large companies believe that cross-shareholding practices should be abolished for the stabilization of stock prices. Yet there will still remain a practical problem even if those companies desire to abolish cross-shareholding. In order to dispose of the bad loans of financial and non-financial institutions, those shares should be retired and companies' capital should be reduced. But some companies as well as financial institutions will have difficulty retiring those shares, and thus must find new shareholders to replace their former shareholders. However, without the stabilization of stock markets and banks' regainment of market confidence, this will be difficult. They have been delaying the disposal of bad assets, waiting for the stock markets to realize gains, during which time bad loans increased rapidly. Meanwhile, with the persistent recession of the Japanese economy and the fall in domestic stock prices, uncompetitive companies had been increasingly turning to the indirect raising of funds through main banks. Even after the bubble burst of the Japanese economy, main banks' loans to the real estate, construction and distribution sectors, whose profitabilities had all declined, rose. Not surprisingly, bad loans in the aforementioned three sectors account for 54% of the total amount of bad loans in the Japanese financial and corporate sectors (Sohn 2001; Bank of Japan 2001, 76). Another notable trend was the increase in loans to existing businesses rather than start-ups (Bank of Japan 2001, 100). Companies with a higher risk of bankruptcy depended on main banks for loans. For their part, main banks lent additional money to these companies to prevent them from going bankrupt, as a result of which a vicious cycle was formed. Eventually, large main banks such as Hokkaido Takushoku Bank and Japanese Long-Term Credit Bank went bankrupt. Even worse, public funds were again injected into 15 large banks, resulting in a jump in the bad loans of these banks. All these results are proof that main banks, although they had possessed information on the companies they dealt with, have been suffering for a long time from being unable to dispose of their bad loans. Evidently, the total amount of bad loans Japanese banks held reached 32.5 trillion yen as of March 2001, up from the 29.8 trillion yen

recorded in March 1998<sup>3[3]</sup>. The ratio of bad loans has also been continuously rising, to post 6.6% in March 2001. And according to FSA of Japan, the amount of loans that have the potential to be bad loans totaled 64 trillion yen<sup>4[4]</sup>.

## 2.2. Korea: the re-strengthening of government intervention

The Korean main bank system looks similar to Japan's but has a different background. It was introduced as a means to supervise large-size companies. In 1973, the economy was in recession and the number of insolvent companies was growing under the influence of the first oil shock. In this situation, in order to improve the capital structure of businesses and promote their disclosure, a "system to supervise loans extended to the affiliates of *chaebols* (conglomerates or business groups)," was established and enforced in July 1973 in the form of an agreement among creditors. Subjects of the system were business groups composed of affiliates of *chaebols* with more than 5 billion won worth of total debts from banks. The banks with which major affiliates of such business groups mainly dealt were designated as main banks, representing the whole business group. However, this system was replaced by "regulations regarding fair transactions and the prevention of monopoly in the banking industry" in 1984. The role of Korean main banks was to collect information on the credit history of their client companies and to function as a brokerage to form loan syndicates when their customers needed a large amount of money. In such times, the main banks were supposed to function as designated monitors representing the other financial institutions participating in the syndicate, but in fact, they didn't perform that role effectively due to a lack of screening ability and incentives to supervise. Indeed, Korean main banks such as Hanil, Commercial, Korea First, Korea Exchange, and Cho Hung Banks failed to supervise their credit extended to major customer companies. This resulted in bankruptcy of large companies such as the Hanbo Group, Woo Sung Construction, and the Daewoo Group and, sometimes, even the dragging of those banks themselves to the brink of bankruptcy. One big difference from the Japanese system is that while Japanese banks, which were privately owned, had great incentive to supervise their debtors, Korean banks, which were directly controlled by the government, did not function properly as a supervisor of business groups. The Korean main bank system was, as a matter of fact, nothing but an organization affiliated with the Financial Supervisory Service. Another difference is that there was only a creditor-debtor relationship between Korean main banks and companies, with no type of cross-shareholding relationship such as in the Japanese case. Mainly because the effort to privatize banks in the 1980s failed and thus, the government continued to hold controlling power over them, Korean main banks could not play an independent role. However, Korean main banks underwent a drastic change due to the currency crisis in 1997 and the following big bang in the financial industry. By the injection of large-scale public funds, 8 large commercial banks became government-owned as of December 2001<sup>5[5]</sup> and 43.7% of the total bank market share became occupied by those banks with a majority of foreign shareholders (table 3). These two trends had a significant influence on the success of the big bang in the domestic financial industry. The advent of foreign-owned banks was possible on account of the government's preference for foreign capital attraction and asset sell-off to foreign markets as a means for market opening and economic restructuring.

The Korean financial big bang has been characterized by the re-strengthening of government

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<sup>3[3]</sup> The total amount of bad loans accumulated from 1992 to 2000 that were disposed of reached approximately 68 trillion yen.

<sup>4[4]</sup> It is true that the increase in bad loans is in part due to the strengthening of the criteria of classification. However, the same criteria were applied after March 1998.

<sup>5[5]</sup> Woori Financial Holding Company(it holds e banks such as Hanvit Bank, Pyunghwa Bank, Kyungnam Bank, Kwangju Bank), Korea First Bank, Seoul Bank, Cho Hung Bank, Cheju Bank are actually government-owned.

intervention. The government reshuffled the existing relationships between main banks and corporations by becoming the major shareholder of 8 commercial banks including the Woori Financial Holding Company. The government, foreign capital and a new major shareholder of those banks, promptly exercised measures to estimate the size of non-performing debts with stricter standards and to suspend extending loans to corporations which faced the risk of bankruptcy. And the government, using the Financial Supervisory Service and the Ministry of Finance and Economy, reshuffled the management of undercapitalized banks, while forcing out insolvent banks. Banks, which had failed to perform a supervisory function due to the government control and political pressure, began to strengthen their loan screening functions in order to survive. During the process of this change, 590 financial institutions in total were forced out (Public Fund Oversight Committee 2001, 211). Accordingly, the number of financial institutions, which totaled 2,101 in the pre-crisis era, fell to 1,561 in 3 years<sup>6[6]</sup>. The reduced number of financial institutions indicates that Korea has disposed of 90.6 trillion won worth of non-performing debts since the currency crisis. In addition, the Korean banking sector recorded a rate of non-performing debts to total extended loans in June 2001 of 5.7%, with total non-performing debts standing at 30.2 trillion won, the first lower-than-6% figure since the introduction of the new forward looking criteria (FLC) at the end of 1999. This implies that the capital structure of banks has become much healthier. In fact, banks began to turn into the black in 2001 with their profitability enhanced as a result of the banking and financial restructuring that had begun in 1998. Korean banks' corporate governance structure, which was not characterized by a cross-shareholding relationship with companies such as in the Japanese case, was the reason for the prompt disposal of non-performing debts through the intervention of the government. Though similar cross-shareholding relationships appeared between *chaebols* and their affiliated non-bank financial institutions, which they used as financing vehicles (OECD 2001, 158-159), these relationships can be said to have been the unilateral governance of the finance sector by industrial capital which constitutes the difference from the Japanese case. Besides, investment companies could hold only an amount of not more than 7% of equity of their affiliated companies' total trusted property (Public Fund Auditing Committee 2001, 126). Therefore, there was no instance in which financial restructuring was interrupted by cross-shareholding or in which the sell-off of non-performing debts was delayed for the same reason. Because Korea has a particular *chaebol* reform program to regulate *chaebols* that control non-bank financial institutions, *chaebol* reform had a positive influence on the banking and financial restructuring in turn.

### **3. EXTERNAL SHOCK, PATH-DEPENDENCE AND THE POLITICAL ECONOMY OF BANKING AND FINANCIAL RESTRUCTURING**

Under the pressure of globalization, Japan and Korea have been implementing the institutional transformation. They are in the middle of a transition from bank-centered, indirect financing systems to stock market-centered, direct financing systems. Prior to their financial big bangs, indirect financing, loan screening, and supervision of businesses through main banks were the main functions of their financial sectors. However, since the big bangs, the role of main banks has been weakened in the two countries, while direct financing has increased. However, because both Korea and Japan do not have a well-developed capital market, it will take a quite long time for the two countries to establish firm and secure institutions that comply with the change.

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<sup>6[6]</sup> The number far surpasses the number of financial institutions, 142, that have completed restructuring in the ten years after 1990 in Japan.

Despite the similarities between the two countries, many differences have been evident during the process of their financial sector restructurings. Though the Japanese financial big bang began earlier than the Korean one, its performance lags behind. The speed of the disposal of non-performing debts is faster in Korea, as evidenced by the fact that Korean banks saw their profitability improving and their books turning into the black from 2001. What are the reasons for the different results? First of all, the motivation behind the respective big bangs is an answer. In the Japanese case, the financial big bang began as the final step of deregulation, which had continued for a long time for the recovery of the economy. On the other hand, in Korea, the financial big bang began suddenly due to the external pressure of the IMF after the economic crisis. In other words, while the Japanese big bang was the result of an internal choice, the Korean big bang was brought on by external pressure. Therefore, banking and financial restructuring in Japan gradually progressed, while that of Korea took place in a short period. The most important reason for the difference however, was that Japan wanted to conduct banking and financial restructuring only with its internal resources, thus its performances related to asset sell-off to overseas markets and to foreign capital attraction were meager. Despite mounting U.S. pressure that called for drastic financial sector restructuring, Japan still adhered to restructuring in their own way (*Nihon Keizai Shimbun*, 6 September 2001). By comparison, Korea was able to achieve its goal more easily because its government adopted the measure of disposing of non-performing debts through asset sell-off to overseas markets. The continued cross-shareholding was another factor that hurt the performance of the Japanese financial big bang. While cross-shareholding remained a main stream practice, the management of main banks and corporations had no responsibility or incentive to promptly dispose of bad debts. Both continued to evade that responsibility, only anticipating the recovery of the economy and stock markets. Up until very recently, they repeated the selling and re-buying of holding stocks in anticipation of a rise in stock prices (*Toyo Keizai*, 18 June, 1998; 2 June 2001). A situation continued in which healthy companies turned their backs on main banks and in turn, expanded their loans to unhealthy companies. Therefore, the supervising role of main banks became paralyzed, while cross-shareholding worked as a stumbling stone to the disposal of bad debts. On the other hand, in Korea, the government's prompt countermeasures were possible because banks and companies had only a creditor-debtor relationship without cross-shareholding. The Korean government was able to dispose of bad loans easily by transforming debt into equity through the injection of public funds. Because the big bang was initiated by external pressure, banking and financial restructuring in Korea progressed in an aggressive way. Objections from political circles over the restructuring were meager, and collective action problem by major actors such as bureaucrats, businesses, and banks was relatively rare. Besides, the Kim Dae-Jung government, which was supported by the IMF, was able to strongly control any collective actions. In contrast, in Japan, as debate among the ruling party, opposition party, and bureaucrats over market-boosting measures and usage of public funds lengthened, they missed a good window of opportunity, resulting in policy failure. *Okurasho's* moral hazard and failure of monitoring, which appeared during the process of disposal of bad loans in *Jusen* (financial institutions initially created in the 1970s to provide loans to individual home industry), was the starting point of the failure to dispose of Japanese bad debts. Japan, which was not effective in the reform of other declining industries, failed to be successful in the restructuring of the financial industry. Finally, the differences in the macroeconomic conditions of Korea and Japan had a significant effect. While Korea could raise a large amount of public funds due to its relatively small fiscal deficit, Japan could not on account of its serious fiscal deficit. Korea has seen its businesses improving their capital structure and its financial sector disposing of bad debts more promptly since the economic recovery began in 1998. The shock of the Daewoo Bankruptcy also subsided relatively easily because the Korean economy was growing more than 10% at that time.



On the contrary, due to its long-term recession, Japan was not able to even estimate the amount of its bad debts. Furthermore, with stock prices falling, bad debts were mounting more. In the end, Korea disposed of bad loans under the government's strong intervention, and promoted banking and financial restructuring effectively, while Japan failed to resolve the issue of the force-out of insolvent companies and banks. In the Japanese case, the government had no room to intervene due to tight ownership relations between the main banks and corporations. In other words, Korea promoted government-led financial restructuring, while Japan continuously left it up to market participants.

#### 4. CONCLUSION

Korea intended to reform its banking and financial sectors, which had accumulated during the high growth era, through government intervention, while Japan left this process to the invisible hand. As can be seen in the Korean case, government's effective intervention is necessary for the success of big bangs in countries with a history of government-led economic growth. The implementation of financial big bangs and restructuring can be successful with the help of the government to prevent path-dependence and endogenous inertia (Aoki 2001, 340). When left to the market, like in the Japanese case, adverse selection phenomena may occur due to path-dependence and endogenous inertia, interrupting the rapid restructuring. However, tasks remain for both Korea and Japan. Korea has to solve the problem of what kinds of relationship should be established between banks and corporations after the government ends its role in the future. Japan should find an alternative to replace its existing model. After the main bank system has been weakened, it can be said that Japan's bad debts will continue to increase without the establishment of an alternative financial system and related institutions.

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## **SELF-ASSESSED PERSONALITY DETERMINANTS OF TEAM MANAGEMENT EFFECTIVENESS OF POLISH MANAGERS: A PILOT STUDY**

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### **ABSTRACT**

*The article is based on a thesis confirmed by management science that an important role among the determinants of management effectiveness is played by psychological predispositions especially personality traits and personal skills of management staff. The text contains epistemological and empirical portions and aims to systematize knowledge concerning the psychological predispositions of managers which improve the effectiveness of team management as well as discover which traits and skills managers attribute to themselves when asked about the determinants of their personal effectiveness of management. The study sample consisted of 60 representatives of middle and upper management. The tool used to realize the study was a survey questionnaire developed by the author. The research showed that in the opinion of the responders their professional effectiveness is mainly improved by: assertiveness, ease of reaching decisions, empathy and being open to cooperation. Other qualities which achieved a high response rate (over 1/4 of participants) included: responsibility, emotional intelligence, self-discipline as well as diligence and reliability. As part of the discussion the obtained results were compared to models of effective managers presented by other authors.*

**Keywords:** *effectiveness, management qualities and skills, team management effectiveness*

### **1. INTRODUCTION**

The answer to the question which factors influence the effectiveness of team management is one of the key problems of the theory and practice of management. In addressing within this article the problem of the effectiveness of team management the author focuses on the type of social effectiveness where management activities cause desirable "changes in social attitudes and impact the humanization of interpersonal relations" (Pszczółowski, 1978, pg. 60). The question: "How do effective managers act?" (Buckingham, 2005) rather than: "What are effective managers like?" is asked more and more frequently in management science. Despite that fact it is commonly agreed that psychological predispositions, especially personality traits and personal abilities of management staff play an important role among determinants of management effectiveness. Hence, the exploration of the types of attributes and skills listed by managers asked about the determining factors of their own personal effectiveness in managing a team has been ascertained as cognitively interesting. Indirectly this research also concerns the self-awareness of managers so important to the fulfillment of this organizational role. The research sample consisted of 60 representatives of upper and middle management (students of the elite EMBA program realized by the Institute of Economics of the Polish Academy of Sciences in Warsaw).

### **2. PSYCHOLOGICAL ASPECTS OF TEAM MANAGEMENT EFFECTIVENESS**

The problem of the effectiveness of management, especially its assessment, is very difficult and relatively seldom addressed in scientific literature. Undoubtedly this is the result of the fact that management effectiveness cannot be equated with the effectiveness of the organization.

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Organizational effectiveness involves not only measurable economic results presented in financial reports but also complex social or psychological aspects measured through, among others, the level of employee satisfaction or the input of the organization in the development of the social environment (Cameron, 2010; Matwiejczuk, Samul, 2016, pgs. 56-60). Effectiveness of an organization is, to a large degree, dependent upon the effectiveness of management understood as effective decision making and carrying out operations compliant within applicable legal regulations as well as aimed at the realization of organizational strategy. This manner of thinking is confirmed by the commonly accepted definition of management formulated by R.W. Griffin who calls it "a set of activities (including planning and decision making, organizing, leading or managing people as well as controlling) directed at an organization's resources (human, financial, physical and informational) with the aim of achieving organizational goals in an efficient and effective manner" (Griffin, 1998, pg. 36).

Economics reduce effectiveness to the ratio of results to expenses incurred to attain them. Effectiveness defined in this manner finds a wide range of application in the theory of economics as well as the economy of businesses and accounting. On the basis of business economics and accounting the assessment of effectiveness is mainly connected with a ratio analysis (Zięmbicki, 2012, pgs. 381-391). Quantitative criteria also dominate in traditional models of team effectiveness. Team effectiveness was ordinarily connected to economic categories including: turnover and profit volume or the amount of goods or services produced. It was, therefore, identified with efficiency and productivity. "The most common measure of team effectiveness is its quantitative measure defined using measures of labor effects (product of the quantity and quality of work) as well as labor expenditures (labor costs, time, labor intensiveness, number of employees)" (Kozusznik, 2007, pg. 102). Nowadays management sciences address the problem of effectiveness in a broader context. It is seen as organizational effectiveness which makes use not only of economic but also praxeological and axiological measures. Team effectiveness is assessed through the prism of economic and behavioral elements as the ability to realize established aims (results) at a specified level through objective indicators (for example, sales data, managers' observations) and subjective indicators (the team's perspective or its condition measured through employee's satisfaction, ability to cooperate within the team, group cohesion and attitudes of members). This division points to the three-dimensional perception of team effectiveness consisting of:

- a) team efficiency – the degree to which the results achieved by the team are compliant to the quantitative, qualitative and time standards established by the recipients,
- b) member satisfaction – a degree to which the group experiences growth and personal well-being of team members,
- c) conditions of future cooperation – the level to which realization of tasks improves the ability of its members to cooperate in the future (Pyszka, 2015, pgs. 40-42).

Efficiency and effectiveness of management requires the recognition of the fact that management staff possesses appropriate abilities to formulate goals and determine ways of achieving them. At the same time in asking about the effectiveness of management it must be discovered which attributes of people holding managerial positions are the foundation of their professional efficiency and effectiveness (Winsborough, Chamorro-Premuzic 2017). The personality of the manager, which is an integral element of professional qualifications of management staff as well as an important factor in choosing the style of managing a team, becomes a key factor to success (Jasińska, 2009, pgs. 71-72). Research shows that personality traits of managers influence the level of professional satisfaction of employees (Shahriyar, 2004; Wasiluk, 2011; Rasuli, Eslami 2013). For example, a positive correlation between employee satisfaction and personality features of managers such as extraversion and being open to new experiences (Patrick 2010) as well as scrupulousness in performing one's duties (Metz,

Kulik, Cregan, Brown 2017) has been confirmed. In management theory numerous, competing interpretations containing profiles of personality traits and constructed on them abilities determining effective management of a team have been developed (Ejimabo, 2015). The model of effective management (2000) created by M. Adamiec and B. Kożusznik is an example of one such theoretical construct. On the basis of over eight hundred diagnoses of individual managers of various Polish organizations (including small and medium-sized enterprises as well as large corporations) M. Adamiec and B. Kożusznik created a model of effective management. It allows the distinction of six basic attributes determining the effective managerial activity in all types of economic organizations. A list of their chosen characteristics is presented in Table 1.

*Table 1: Model of effective management (Kożusznik, Adamiec, 2000, p. 181)*

Assertiveness	the feeling of confidence and assuredness of being right allowing one to defend that stance, overcome social boundaries and realize personal aims in various social environments
Motivation	an equally elementary ability to direct one's own energy at specific goals and experiencing that energy as one's own, resulting from one's own identity, from being ourselves; the awareness of pursuing professional aims as individual and authentic as well as a certain minimum of these aspirations
Creativity	the ability to effectively perform tasks encountered for the first time, devising of unconventional solutions, ways of operation and new ideas, the ability of strategic planning and correct anticipation of the future
Criticism	the ability to distance oneself and, if necessary, discard one's own projects or ideas if they do not survive confrontation with reality or argumentation – a lack of criticism in tandem with a high level of assertiveness leads to loss of self-control and not caring about reality which clearly compromises managerial decisions
Extraversion	clear interest in the outside world and the location of personal goals within that world, interest in particular activities and tangible results
No pathological distortions	lack of identifiable through available means pathologies, deviations or extremely dominant psychological traits which could interfere with the achievement of managerial goals

Some of the traits listed in Table 1 can also be found in the model developed by Northouse (2004). He identifies management effectiveness with the high quality of decision-making which measures: the ability to think critically and analytically, response speed, confidence, initiative in social situations and interpersonal and creative skills. However, it must also be said here that there are researchers who hold a varying position and respond critically to effectiveness as an adequate term in describing management. In their opinion "through the cumulated ambiguity in its meaning this designation (...) has lost a measure of its usefulness and suitability" (Szpanderski, 2005, pg. 43). In the context of management as managerial activity it is more adequate to look for factors determining the efficiency and efficacy of this activity. For example, A. Szpaderski (2005, pg. 45) proposes: "if it has become impossible to eliminate from public discourse the term "effectiveness" let us treat it as an equivalent of efficiency". The importance of efficiency as a conceptual category defining the subject of management sciences is also emphasized by S. Sudoł (2004, pg. 8). According to him "making appropriate decisions within organizations as well as their efficient realization" is the essence of management.

### **3. RESEARCH METHODOLOGY**

The results of studies presented in this article are an element of a broader research project. This research was conducted in June of 2017 and concerned 60 representatives of upper and middle management who were also students in the Executive MBA program of the Institute of Economic Sciences at the Polish Academy of Sciences in Warsaw. On account of the relatively small sample size (especially in consideration to women – a total of 18) the study results can be used to identify certain trends or tendencies as well as to formulate hypotheses for further scientific research performed on a more representative group of participants. Study subjects included people having achieved various levels of education but all of them possessed managerial experience had been gained holding high level management positions (an average of 4 years). Although the site of the study was Warsaw the respondents represented all regions of Poland. The research is based on documented literature relating to the concept of self-awareness (Radwiłowicz, 2005, pg. 78) or the process of processing information about oneself and one's relationships with the environment. It is assumed that the participating managers possess external self-awareness relating to behaviors, social roles and interpersonal contacts. As a result the following research problem has been formulated: which attributes and abilities displayed by respondents help them – in their opinion – to effectively manage a team? A tool used to gather data was a survey questionnaire developed by the author. To avoid suggesting possible answers the questions used to solve the research problem were open.

### **4. POLISH MANAGERS ABOUT THEIR PERSONALITY TRAITS – ANALYSIS OF RESEARCH RESULTS**

Table 2 presents the distribution of answers given by managers about their personality traits which, in their opinion, help them the most in the professional, effective management of a team. The questionnaire also asked that they limit their answers to no more than five attributes. Most respondents conformed to this condition with 8 listing more than five characteristics.

*Table following on the next page*

Table 2: Personality traits helpful in effective team management – as self-assessed by managers (developed by the author)

Personality traits	Number (n=60)	%
assertiveness	28	46.7
ease of decision making	26	43.3
self-discipline, internal motivation	22	36.7
empathy	19	31.67
being open to others, being open to cooperation	18	30.0
responsibility	17	28.33
emotional intelligence, emotional stability, patience	17	28.33
diligence, reliability	16	26.67
communication skills	14	23.33
feeling of self-worth	14	23.33
being open to new knowledge and new experiences, professional curiosity	12	20.0
credibility	11	18.33
self-confidence, pugnacity	10	16.67
intelligence and being able to adapt	9	15.0
consistency and being methodical, decisiveness	9	15.0
organizational skills	6	10.0
creativity, innovativeness	6	10.0
high ethical standards, honesty	6	10.0
being extroverted, ease in meeting new people	5	8.33
the ability to think (analytical, critical, strategic)	5	8.33
ambition, focused on succeeding	5	8.33
perceptiveness	4	6.67
being energetic	4	6.67
optimism	3	5.0
humility and tolerance	3	5.0
independence	3	5.0
<b>Management skills and attitudes</b>		
the ability to spread one's enthusiasm, motivational skills	8	13.3
leadership, charisma	4	6.67
ability to build relationships, establishing trust within the team	4	6.67
fair treatment of co-workers, impartiality	4	6.67
the ability to manage and solve conflicts	4	6.67
the ability to admit to a mistake, humility	3	5.0
focused on growth, development	3	5.0

\* The results do not amount to a total of 100% on account of respondents being able to select more than one trait or ability

The analysis of results shows a big dispersion of answers. There was no personality trait which was chosen by most respondents. Psychological predispositions selected most often by managers indicated as the psychological foundation of their managerial success included: assertiveness, self-discipline (synonymous with internal motivation), ease of decision making, empathy as well as being open to others and cooperation. A relatively high indicator was also attained (over ¼ of the sample) by the following attributes: responsibility, emotional

intelligence, self-discipline as well as diligence and reliability. It is distinctive that some managers taking part in the study asked about traits and behaviors influencing the effectiveness of managing answered by listing skills or professional abilities (for example the ability to motivate, leadership, relationship building or impartiality in treating employees). On the basis of this fact it is possible to cautiously conclude that the belief that although personality traits are important but are not sufficient to effectively manage a team is relatively strongly embedded in the consciousness of managers. This role also requires knowledge, experience and particular professional skills.

## 5. CONCLUSION AND DISCUSSION OF THE RESULTS

Representatives of upper management asked to assess the traits being the source of their effectiveness in managing a team most often (at least 30% of all selections) named: assertiveness, self-discipline and internal motivation, ease of making decisions, empathy and being open to other people and cooperation. As less significant but gaining over 25% of responses study participants considered: responsibility, emotional stability as well as diligence and stability. It can, therefore, be assumed that the personal experiences of respondents only partially reflect the rules set in models of effective management presented in literature. The respondents' assessment did indeed confirm the important role of assertiveness, internal motivation and openness expressed in the model of Kożusznik and Adamiec (2000). The remaining elements of that model: criticism, creativity and extraversion received less than 25% of responses. Scrupulousness featured in the results of research performed by Metz et al. (2017) was chosen as an element of success by only 26.7% of Polish managers participating in the study. The problem of the self-assessment of personality predispositions of managers important in respect to management is significant enough to warrant the continuation of this research on a sample fulfilling the criterion of being representative and to expand them to include an international dimension.

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## PROFILES AND DYNAMICS OF IN-WORK POVERTY IN ROMANIA

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### **ABSTRACT**

*One of the current social challenges, together with the strong dimensions of the labor market and of the social protection / social assistance system, is in-work poverty. Having a job has often been associated with a secure protection against poverty and social exclusion, but this aspect does not automatically exclude the risk of poverty for people who work, and statistical data argue this affirmation. Nowadays, both on national and international level, the number of working people facing poverty is increasing, i.e. their work incomes are below a certain poverty threshold, even they have a job. Other circumstances added to this picture, such as certain individual or household characteristics, generate the increase of the poverty risk and also the vulnerability to poverty of these households / persons. In this paper, in-work poverty rates will be analyzed for some types of households and certain determinants related to education or some occupational characteristics and structures, detailing those circumstances that influence, generate and sustain in-work poverty. The analysis of in-work poverty incidence indicators will be structured at national level and, comparatively, at international level, in dynamics, during the period 2007-2015 / 2016. This in-work poverty profile can lead to highlighting some of the main factors and determinants that generate and sustain this type of poverty. Sharpening an in-work related poverty profile by highlighting the high incidences or persistence over time of this phenomenon could lead to better targeted actions for the most vulnerable groups to poverty and in-work poverty. These actions must target the multiple dimensions of the labor market, of social protection / social assistance and tax policies, or even combinations of these major policies, to alleviate poverty and in-work poverty incidence.*

**Keywords:** *Determinants, Dynamics, Indicators, In-work poverty, Poverty, Structures*

### **1. INTRODUCTION**

Almost all social challenges, alongside the strong dimension of the labor market and of the social protection / social assistance system, also focus on in-work poverty. Having a job is usually seen as the best protection against poverty and social exclusion, but it does not automatically exclude the risk of poverty for all working people. The paper focuses on in-work poverty that represents a labor-market component, but also a component related to social protection / social assistance. These two aspects are strongly interconnected, and the specific literature abounds in references offering a better knowledge of the main factors and causes that generate and support in-work poverty. These are important aspects to consider in order to find solutions, proper action directions to reduce the poverty incidence. The knowledge offered by the analysis of these interconnected indicators within the common portfolio of poverty reduction and social inclusion indicators is particularly important for the policies in these fields, and the international strategic documents refer to these two valences, respectively employment policies and poverty alleviation policies. The current European and, implicitly, national strategic documents based upon the open method of coordination focus on the growth and promotion of social inclusion and the decisive impact of poverty reduction, by providing the access to the resources and rights required for the participation in society, for an active inclusion

for all, through social inclusion actions well-coordinated and directly targeted for specific groups. These objectives must also be linked to the employment component, while ensuring the conditions of occupational inclusion, for an inclusive, highly qualitative labor market, but they must also be connected to the poverty reduction theme, including in-work poverty. The presentation of this poverty and employment binomial provides a very important input for assessing and monitoring the policies both in terms of poverty and social exclusion reduction, and in terms of inclusive and qualitative employment. These two components, through the indicators highlighted in this paper, should be analyzed, evaluated and monitored together, and the initiatives within the two major areas of interest should be interlinked where they cover common issues. Thus, through the indicators on poverty among working people, the paper offers a feedback for the situation of people who have jobs and are also faced with poverty, and this category must also be subject of action directions, for increasing their quality of life - a major objective of the international and national strategies. For persons who work and their work income places them below the poverty line, there are sometimes other cumulative circumstances that only add to the financial strain of the households. These circumstances affect mainly: one-parent families with children or families with many children and / or other dependent persons in the households, the unemployed, retired people, people with disabilities, young people who are neither in education nor in employment, inactive people, and so on, even if they have some resources provided to them by the social protection / social assistance system. In order to respond to the current challenges, it is essential to address the employment and social dimensions in a coherent way and strategic documents rely on both valences in the struggle to meet the common goals set out in the Europe 2020 Strategy.

## **2. LITERATURE REVIEW – STRATEGIC DOCUMENTS**

For a long time, it has been considered that the poor don't have jobs, that poverty is associated with unemployment and employment is the safe way to reduce poverty, but statistics have shown that these are just desires and that, in fact, even if a person has a job, it is possible to be placed below the poverty line by the work income. By combining these two essential dimensions, the phenomenon of in-work poverty, together with other complementary indicators, provides an eloquent link between poverty and employment. The Europe 2020 Strategy (European Commission, 2010, pp. 3-4, pp. 16-18) outlines the key objectives for 2020 and, in line with the major priorities, inclusive growth has an important position by promoting an economy with a high employment rates in order to ensure social and territorial cohesion. At the same time, the EU intends to foster inclusive growth with the help of two major initiatives, namely an Agenda for New Skills and New Jobs, as well as the European Platform against Poverty and Social Exclusion. The first initiative (an Agenda for New Skills and New Jobs) aims to help citizens acquire new skills, adapt to changes in the labor market and reorient themselves professionally, but also to modernize labor markets, increase labor productivity and employment rates, reduce unemployment and ensure the sustainability of European social models. The European Platform against Poverty and Social Exclusion aims to ensure economic, social and territorial cohesion; to ensure respect for the fundamental rights of people suffering from poverty and social exclusion and to offer them a dignified life and an active role in society; to support measures favoring community integration, vocational training and insertion, and access to social protection. These major growth-enhancing initiatives for social inclusion through poverty reduction, addresses the two aspects in a segmented manner, with strategic European targets formulated in these directions. Through the analysis of the indicators from the common indicators portfolio of the social inclusion theme, the present paper simultaneously captures the two aspects, both poverty and employment, with emphasis on the common indicators. Thus, the paper provides an analysis of the in-work poverty rates, building a dynamic profile of the working poor, taking into account certain variables (age, type of household,

intensity of work in the household, level of education, etc.) and comparing Romania to the other European and non-European countries reporting these indicators to Eurostat. In the specific literature, many documents deal with in-work poverty, official documents of the European Commission, articles, scientific papers, etc. Thus, one of the sources (European Commission, Eurostat, In-work poverty in the EU, 2010, pp. 7-12) analyzes in-work poverty, starting from the definition of this indicator in the European Commission's Portfolio of Indicators. Then, the Report presents an annual in-work poverty image for the country panel. The Report analyzes in-work poverty yearly in terms of personal and job characteristics, but also in terms of household characteristics. At the same time, the Commission's Report identifies a number of factors that play an important role in generating and sustaining in-work poverty, including the following: employment structure, the household structure, gender inequality, unemployment, labor market regulation and also social policies. The Report states that "among all these factors, it may be difficult to identify effective levers to alleviate the risk of in-work poverty" (European Commission, In-work poverty in the EU, 2010, pp. 11). Other sources (European Commission, Directorate-General Employment, Social Affairs and Inclusion, Directorate A, Employment and Social Developments in Europe 2016, pp. 84-93) treat in-work poverty from the perspective of identifying the multiple causes and factors that generate and support it, linking in-work poverty to low wages, or labor market status, work income, household characteristics, and social transfers. The Commission's 2014 Report (European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Directorate A, Employment and Social Developments in Europe 2014, pp. 141) analyzes the incidence of in-work poverty in comparative terms for many countries, including Romania. There are numerous other annual reports of the Commission that focus on the in-work poverty analysis and this is an important sign that in-work poverty is strongly interlinked with the labor market and social protection / social assistance themes, being an important indicator in the social indicators board of the Union's countries. Other sources state that in-work poverty must be seen in both individual and household contexts (Spannagel, 2013, pp. 6-7). From the perspective of in-work poverty, the author identifies some individual characteristics related to employment, namely low income, or atypical forms of employment, or low qualifications. Also, from the perspective of individual characteristics, the author remarks that public welfare also contributes to a certain extent to in-work poverty, identifying the lack or insufficiency of in-work benefits. From the other perspective, namely the household context, in-work poverty is mainly influenced by low work intensity in the household. The family context can also lead to in-work poverty, through circumstances such as a single income in the household, or the presence of many children, of elderly, inactive or unemployed. The author argues that public welfare influences in-work poverty from a household perspective through low levels of transfers and family benefits. Another research study focuses on the causes that lead the individuals to find themselves confronted to in-work poverty, bringing to the forefront certain characteristics of the household and the existence of low work income (Tejero, 2017, pp. 157-159) through analysis of numerous variables that refer to both labor and household size in connection to poverty rates, in-work poverty incidences, and persistence of poverty over time. Other studies focus on in-work poverty (Horemans, Marx, Nolan, 2016, pp. 14-15), but from the perspective of other variables, such as the type of work contract (full-time and part-time work) knowing that those with part-time contracts face higher poverty risks than those with full-time contracts, probably also because they work fewer hours. Some authors (Hallerod, Ekbrand, Bengtsson, 2015, pp. 473) investigated whether in-work poverty is a low-wage or unemployment problem and the longitudinal data from EUSILC / European Union Statistics on Income and Living Conditions have shown that "in-work poverty is a problem that affects self-employed and people in a marginal labor market position, that is, those who, for different reasons, move in and out of employment. Therefore, in-work poverty is mainly an unemployment problem, not a low-wage

problem". So, a phenomenon that is not new, that has always caused many controversies and multiple debates on whether it is a labor market issue or a social welfare issue, the in-work poverty requires a lot of attention, as it affects a large number of people, and it has many causes and multiple factors that generate and sustain it. In-work poverty needs to be thoroughly analyzed, in its many structures and aspects, and if incidences are high or persistence over time is observed, the issue must become a focal point of national strategies.

### **3. ANALYSIS OF IN-WORK POVERTY**

Since specialized literature identifies numerous channels that generate and sustain in-work poverty, including: low earnings, temporary and part-time work, personal characteristics, professional status, household structure, etc., the present paper will focus on these major factors, and will analyze in the structure, according to the statistical data, these main determinants.

The most important structures of the in-work poverty indicator are: gender, age group, activity and employment status, type of household, intensity of work in the household, education level, type and form of contract, and so on.

a) by age group: the in-work poverty indicator is quite structured, with many subgroups, but for comparability with other indicators of in-work poverty, the segment of 18 years and over has been chosen from the many subdivisions of the variable.

b) by type of household: single person, single person without dependent children, 2 or more adults without dependent children, 2 or more adults with dependent children, households without dependent children and households with dependent children.

c) by the work intensity in the household (for the population aged 18-59): households with dependent children and households without dependent children were analyzed, and the structure is: work intensity other than very low ]0.2-1], very high work intensity ]0.85-1], high work intensity ]0.55-0.85], medium work intensity ]0.45-0.55] and low work intensity ]0.2-0.45[.

d) by level of education (International Standard Classification of Education ISCED 2011): less than primary level, primary and lower secondary education (levels 0-2), upper secondary and post-secondary non-tertiary education (levels 3 and 4) and tertiary education (levels 5-8).

Obviously, there are many other structures of the in-work poverty indicator, but in this paper, we will analyze the above, considering them to be particularly important in generating and sustaining in-work poverty.

#### **3.1. Analyzes of in-work poverty by age group**

The structure of the in-work poverty indicator by age group: the indicator is quite structured, with many subgroups, but for comparability with the other indicators, the segment of 18 years and over was selected from the many divisions of this variable. Over the analyzed period of almost 10 years, 2007-2015, the EU average was positioned between 8.3-9.5%, while in Romania the incidence of in-work poverty was very high, with rates ranging from 17.4-19.8%, increasing in the first years of in the decade and only with a decrease in 2015 compared to the previous year. However, in-work poverty rates remain very high, double than the European average level.

*Figure following on the next page*

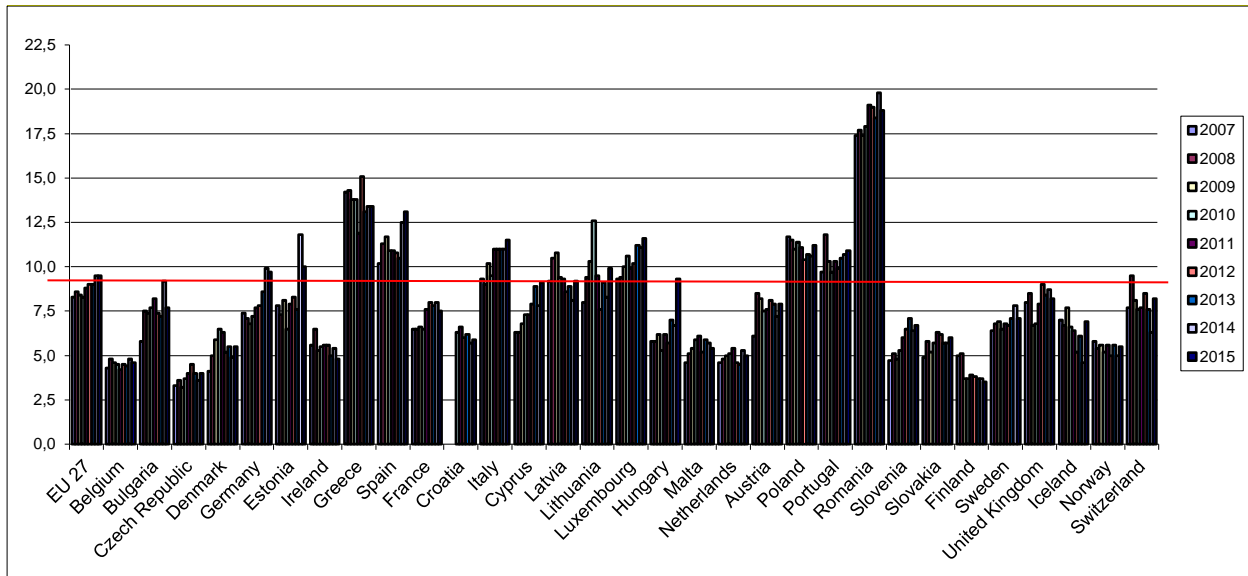


Figure 1: In-work poverty rate for employed population 18+ years, during 2007-2015 (%)  
 Only a few countries reported data for 2016

Source: EUROSTAT, last update 30.05.2017, Extracted on 09.06.2017, link  
<http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>

The worrying situation that should be the focus of our attention is generated by the fact that at national level these incidences reach high values, with rising in-work poverty rates. The 2020 horizon (which is a strategic term with a rather drastic target of poverty reduction) only offers a short buffer of time to recover from the high registered rates. Thus, the Strategy on poverty and social exclusion reduction (GD no. 383/2015) needs to exert its effects more quickly, in this short timeframe. Other countries with high in-work poverty rates are Greece (12-14%), followed by Spain (10-13%) and then Italy, Poland, Portugal, etc., but the values recorded by these countries are much more reduced than in the case of Romania.

### 3.2. Analyzes of in-work poverty by the type of the household

The structure of the in-work poverty indicator by type of household is: single person, single person without dependent children, 2 or more adults without dependent children, 2 or more adults with dependent children, households without dependent children and households with dependent children.

#### 3.2.1. In-work poverty rate for single person

At the EU level, for households with a single person, the in-work poverty average rate was near the value of 13% in recent years, slightly increasing over the first years of the analysis. Unfortunately, Romania ranks first with the highest rate of in-work poverty over time, exceeding 25-27% in the first 4 years, 2007-2010, then falling to 20% over the last years of the decade. However, national values place Romania at significant distance from the other 33 analyzed countries, as they reach almost the double of the European average. However, one positive fact is that the values of in-work poverty for single person households have been almost continually decreasing from year to year and the rhythm of decline was quite important.

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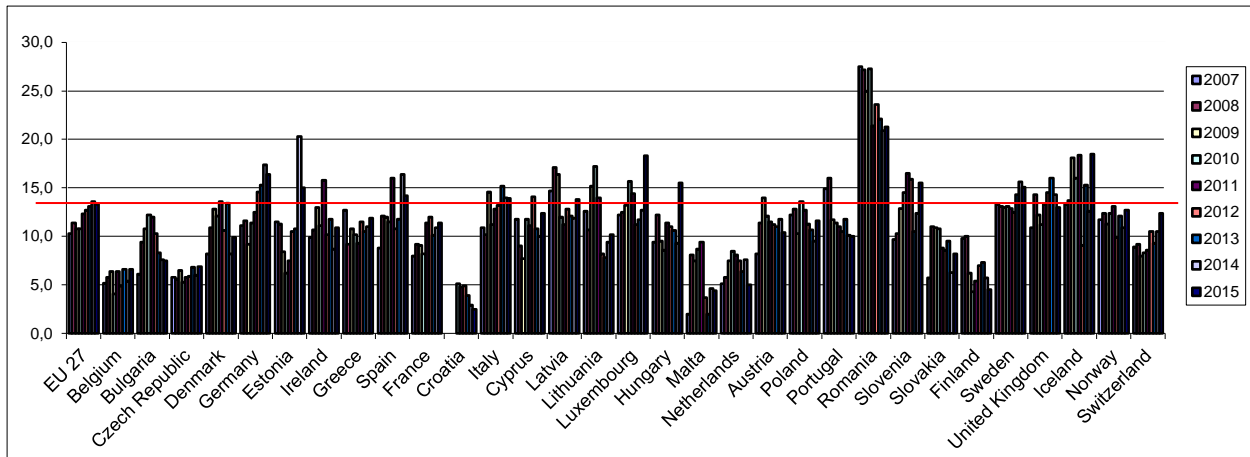


Figure 2: In-work poverty rate for single person, during 2007-2015 (%)

Only a few countries reported data for 2016

Source: EUROSTAT, last update 15.06.2017, Extracted on 05.07.2017, link <http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>

Estonia also has quite high in-work poverty rates, but significantly lower than our national rates. The highest value, of 20% was measured in 2014, while for the rest of the decade there were values between 11-14%, slightly above the European average. Iceland, Luxembourg, Lithuania and Germany follow, with in-work poverty rates slightly exceeding 15% in the last 3 years of the decade.

### 3.2.2. In-work poverty rate for single person with dependent children

In-work poverty for households made up of a single person with dependent children was placed at the 20% threshold for the EU27. Countries with values above this threshold were Luxembourg, Lithuania, Greece (only in one year, 2012), followed at a large distance by Portugal, Romania, Switzerland. Thus, while Romania no longer ranked first in the top of the countries with the highest values of in-work poverty, for this structure of analysis, alternating values of 20-30% place our country over many other countries with quite high rates of in-work poverty. Thus, even if Romania does not occupy one of the top positions with the highest rates of in-work poverty, in the analyzed structure, the values are high and increasing in the last years of the decade between 22-28%.

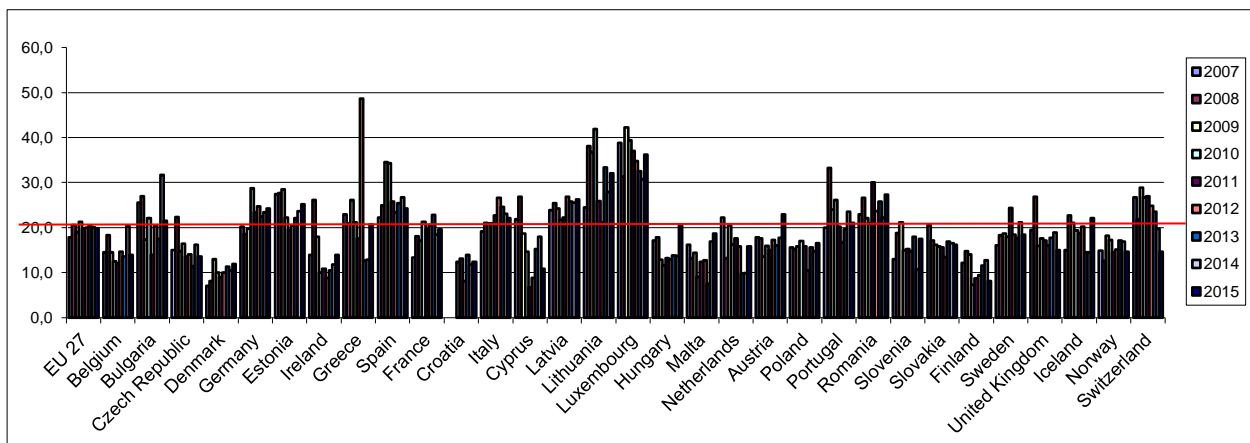


Figure 3: In-work poverty rate for single person with dependent children, 2007-2015 (%)

Only a few countries reported data for 2016

Source: EUROSTAT, last update 15.06.2017, Extracted on 05.07.2017, link <http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>

### 3.3. In-work poverty rate for households with dependent children by work intensity in the household

By the work intensity in the household, for the population aged 18-59, the structure of the indicator is the following: households with dependent children and those without dependent children. For the intensity of work in the household, the structure is: work intensity other than very low [0.2-1], very high work intensity [0.85-1], high work intensity [0.55-0.85], medium work intensity [0.45-0.55] and low work intensity [0.2-0.45]. From this broad structure, the group of households with low work intensity was chosen ([0.2-0.45]), focusing on the 18-59 age group and the households with dependent children. These structures were selected because, as statistical data demonstrate, they show the most significant incidences of in-work poverty compared to other structures (although all the groups are characterized by high rates of in-work poverty, the selected segments have the highest values of these incidences).

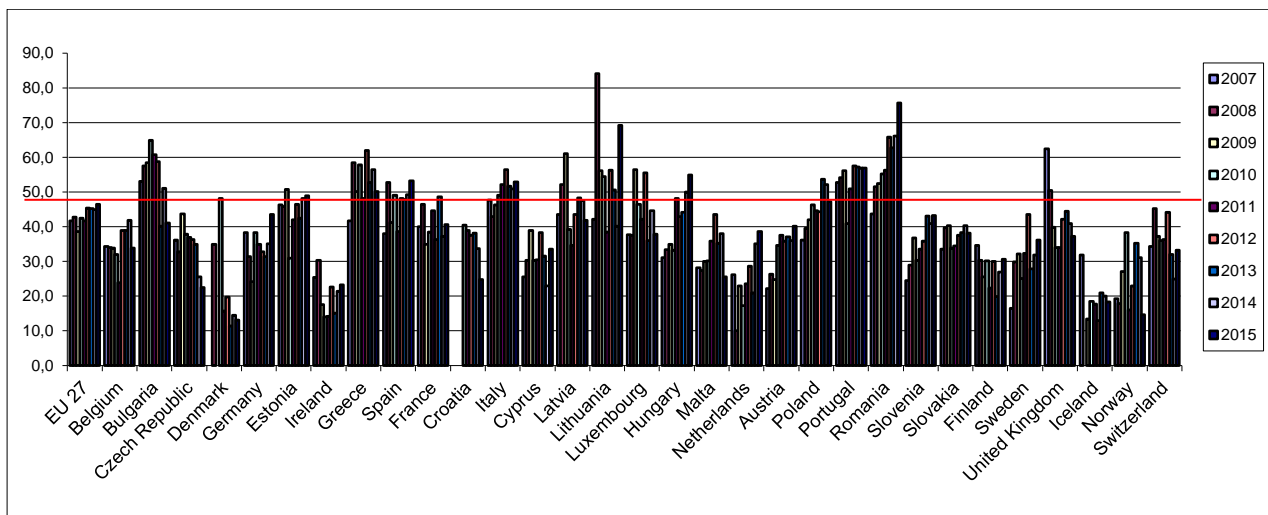


Figure 3: In-work poverty rate for households with low work intensity – households with dependent children, during 2007-2015 (%)

Only a few countries reported data for 2016

Source: EUROSTAT, last update 15.06.2017, Extracted on 05.07.2017, link <http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>

Thus, for these households with dependent children, when the work intensity is low, the European average oscillates between 39-46%, with slightly rising rates in recent years. Lithuania is situated above this average, with values between 40-84%, with two extreme points of 84% registered in 2008 and 70% registered in 2015, while in the remaining years the values range between 40-56%. Lithuania is followed by Romania where in-work poverty rates have risen steadily from 44% to 76%. Thus, Romania records large incidences of in-work poverty among low intensity of work households with children in care. The values of 65-75% are high, much higher than the European average (39-44%) and, unfortunately, they are rising in the analyzed decade.

### 3.4. In-work poverty rate for households by educational attainment level

By level of education (International Standard Classification of Education ISCED 2011), the structure is: less than primary level, primary and lower secondary education (levels 0-2), upper secondary and post-secondary non-tertiary education (levels 3 and 4) and tertiary education (levels 5-8). From this broad structure, we have chosen the group of households where the educational attainment levels are: less than primary level, primary and lower secondary

education (levels 0-2), and upper secondary and post-secondary non-tertiary education (levels 3 and 4). These structures were selected because, as statistical data demonstrate, they show the most significant incidences of in-work poverty compared to other structures (as it is expected, the incidence of in-work poverty for the higher levels of education is quite low).

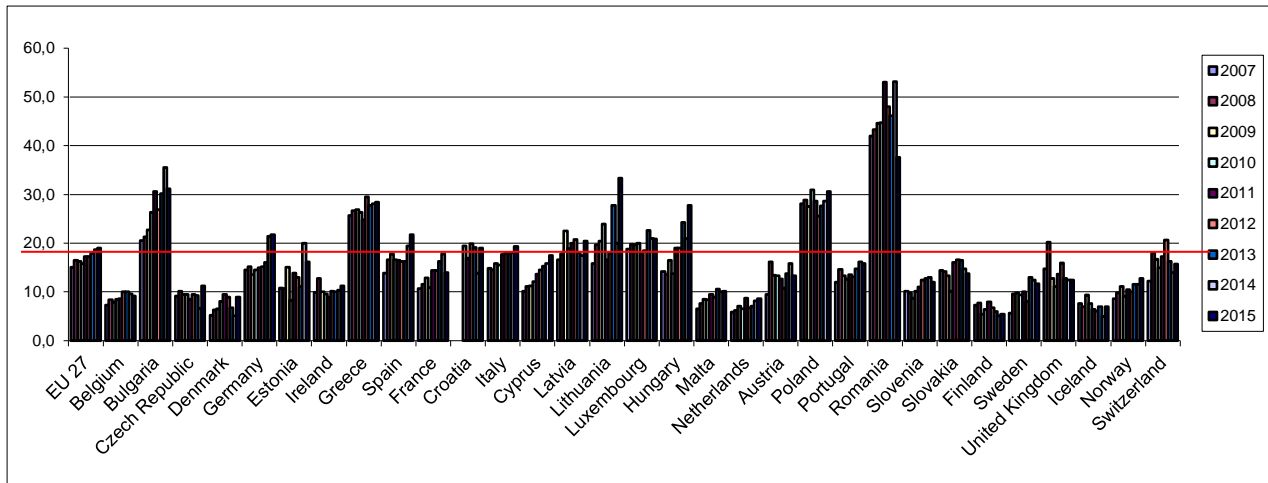


Figure 4: In-work poverty rate by low educational attainment level - less than primary, primary and lower secondary education, levels 0-2, ISCED 11 / International Standard Classification of Education, during 2007-2015 (%)

Only a few countries reported data for 2016

Source: EUROSTAT, last update 15.06.2017, Extracted on 05.07.2017, link <http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>

In terms of in-work poverty among people with low levels of education (ISCED 0-2, respectively less than primary level, primary and lower secondary education (levels 0-2), Romania is far apart from the other 33 countries in the panel analyzed over the 2007-2015 period. So, if the European average indicates values between 15-19% of in-work poverty for these households in the analyzed period, for people with low education, Romania has an in-work poverty incidence of 42-53%. Thus, Romania faces the highest incidence of in-work poverty among people with a low level of education, regardless of the reporting year. Bulgaria follows, but at significant distance, with in-work poverty rates of 20.6-35.5% during the 2007-2015 period (with an increase in 2016, when the incidence is 38.3%). Yet, Bulgaria is in a better position than Romania in terms of in-work poverty among people with low levels of education. In Bulgaria, for households with low education levels, in-work poverty rate is lower than our national value, while the relative poverty rate reverses the hierarchy for these two countries. Thus, as expected, the low education level is an essential determinant not only in the case of poverty, but also regarding in-work poverty, as the lower the level of education, the higher the in-work poverty incidence. Also, for medium education (upper secondary and post-secondary non-tertiary level, ISCED 3-4), even if the relative poverty rates at the national level are slightly above the European average (close to the value of 10% in the last years), the in-work poverty remains still at fairly high levels (approx. 16%). Thus, Romania is again in the top of the countries with the highest in-work poverty rates, almost double the European average and, unfortunately, these in-work poverty rates among the studied households have been growing year after year.

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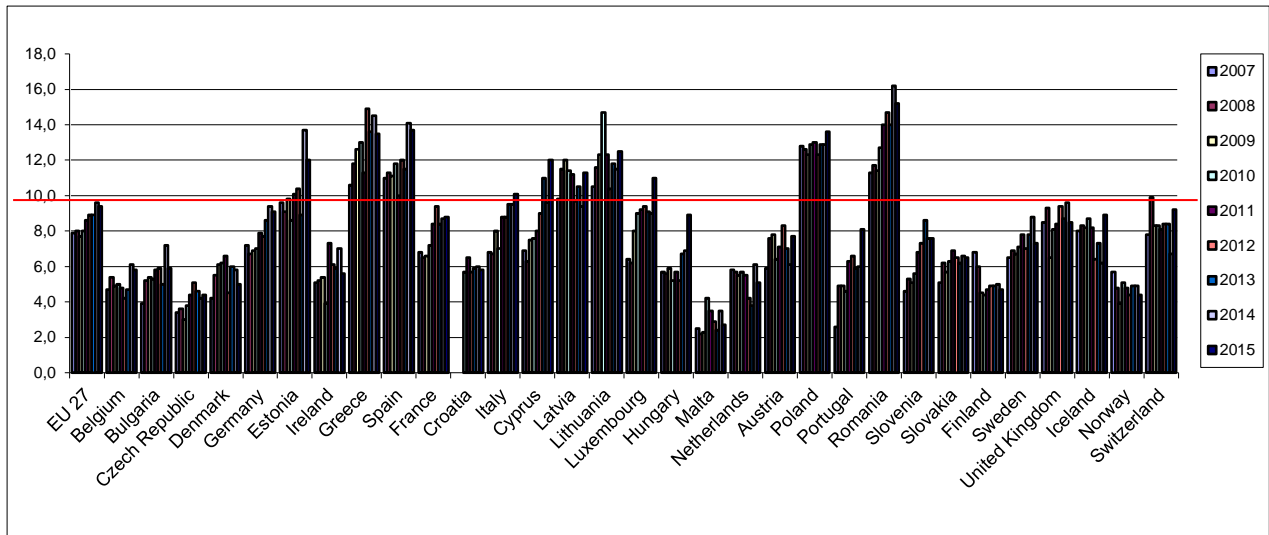


Figure 5: In-work poverty rate by medium educational attainment level – upper secondary and post-secondary non-tertiary education, levels 3 and 4, ISCED 11 / International Standard Classification of Education, during 2007-2015 (%)

Only a few countries reported data for 2016

Source: EUROSTAT, last update 15.06.2017, Extracted on 05.07.2017, link <http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>

Instead, according to statistical data, as expected, the incidence of relative poverty and in-work poverty is lower for people with a higher level of education or tertiary education (ISCED 5-8). The rates remained below the European average level during the analyzed period of time, placing Romania on a particularly favorable position for almost a decade (2007-2015), from the point of view of in work poverty and relative poverty compared to the other 33 reporting countries of the panel, for this level of education.

#### 4. CONCLUSION

Some specific circumstances significantly lead to poverty and in-work poverty certain categories of persons and households: for example, a single person in the household with dependent children, or households where there is low work intensity, or households with low levels of education, etc. Obviously, there are other determinants, but in this paper, we have only focused on some of them, considering them to be essential in generating and sustaining not only poverty, but also in-work poverty. Thus, these coordinates of the profiles of the working poor accentuate and greatly amplify in-work poverty and, even if the rates sometimes enter a decreasing trend, they still have very high values. In addition, in-work poverty is also conditioned by other occupational circumstances such as low wages, low qualifications, precarious employment, part-time work, and so on, elements that often generate low levels of income, and implicitly poverty, but these aspects require further research. Thus, if these dimensions overlap, people / households become particularly vulnerable to poverty and in-work poverty. The paper, through the analyses carried out, highlights a current and alarming picture of in-work poverty, detailing on the most significant determinants. Data shows once again the high levels of in-work poverty in almost all the analyzed structures, emphasizing the already mentioned vulnerabilities, namely low education, low level of work intensity in the household, numerous children in the household, especially in the case of single parents with dependent children, and so on. This reality must be taken into account by present and future policies and strategies, as both poverty and in-work poverty among these vulnerable people / households continue to have high incidences and the deadlines of the European / national poverty reduction strategies on the main goals and targets are very close.

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## POVERTY AND MIGRATORY DECISION

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### ABSTRACT

*In the last two decades, migration represented a phenomenon of high magnitude in Romania. While data on migration for Romania are limited, the media channels have given more visibility to a certain typology of the Romanian migrant: with low level of formal education and lack of qualifications, accepting low skilled jobs, often working without legal forms in domains such as agriculture, constructions or care, leaving the native country to escape poverty. Yet, very recent survey data on recipients of guaranteed minimum income (the poorest of the poor) show that, while they perceive migration as the only functional individual strategy for escaping poverty, they do not, in fact, engage in migration. There are a multitude of theories explaining this apparent contradiction between perception and action and we explore here both the neoclassical approach that refers to the migration decision in terms of costs and benefits analysis, but also the behavioural economics approach that provides insights on decision making under scarcity conditions, adding comprehensive information on exercising migratory agency under poverty imposed limitations.*

**Keywords:** *behavioural economics, deficit of aspiration, migration, poverty, risk aversion*

### 1. INTRODUCTION

The paper explores the poverty imposed limitations in exercising migratory agency. The pretext of this paper was offered by results obtained in a survey targeted towards the poorest of the poor in Romania (data collection – October 2016). Their answers showed that, while they consider migration to be the only effective approach for a better life for them and their families, they didn't embark on that road and they do not see it as applicable to them in the future. This apparent lack of connection between aspirations and future plans determined us to explore further in order to understand the impact of poverty on migration decisions. The scientific literature and especially the new behavioural economics approaches offer a multitude of explanations, as it was empirically determined that the context of poverty is associated to cognitive depletion (Mullainatham and Shafir, 2013), risk aversion and time discounting (Haushofer and Fehr, 2014), some authors even pointing out to a certain deficit of aspirations (Appadurai, 2004; Ray, 2006; Duflo, 2012). All these elements may explain, to a certain extent, why poverty is rather associated to diminished mobility.

### 2. MIGRATION IN ROMANIA – SOME KEY FIGURES

As the National Institute for Statistics shows, between 1992 and 2016, the resident population of Romania decreased by more than 13%, and a large part of this decrease (two thirds, in fact) is due to international emigration. Only in 2007, the year Romania adhered to the European Union, 544000 people left Romania (National Institute for Statistics Report on Migration, 2016). A recent United Nations Report (2016) estimated that more than 3 million Romanian citizens are currently living abroad, as Romania occupies the fourth position in the European Union as an emigration source, after the United Kingdom, Poland and Germany.

The scientific literature regarding Romanian migration patterns and specificities is rather underdeveloped. An analysis of some of the most important studies can be found in a paper by Goschin and Roman (2012). Below we present some key facts they identified (pp. 92 – 93):

- Romanians emigrate mainly due to socio-economic reasons: perceived lack of opportunities, political instability and persistent corruption. There is the perception of improved living conditions, better education opportunities, better career opportunities, higher incomes and a more stable economic environment beyond Romanian borders in the better developed receiving countries.
- Most of the Romanians living abroad (86.2%) have secondary education, while only 12.4% have higher education.
- 44% of higher educated Romanian migrants choose countries outside the European Union, such as Canada or the United States.
- Approximately one in five persons migrated despite being employed in Romania.
- Remittances have reached a \$9.4 bn peak in 2008, but halved in the following two years, due to the economic crisis effects. Despite the decline induced by the economic crisis, remittances have remained relatively high, representing an important support for the families left behind in the country. The two authors emphasize the important role of remittances as a source of external financing, second only to foreign direct investments, for Romania, citing Daianu et. al. (2001) that assessed unsustainable deficits for Romania in the absence of remittances.
- Strongest emigration rates do not occur in poor regions (Oltenia, Moldova, Muntenia), but in the wealthy ones (Bucharest, Banat, Transylvania).

While data on Romanian emigration and scientific literature on Romanian migration trends are relatively scarce, stereotypes on the Romanian migrant were emphasized through mass communication. Romania was often presented as a source of emigration, especially of low and very low skilled labour force. The emigration phenomenon associated to the Roma population was also strongly emphasized. The general impression was that most of the Romanian migrants were uneducated, low skilled, looking for low skilled and low paid jobs in sectors such as agriculture, construction or care, sometimes working without legal forms in the destination countries (see Călbează, 2014). In this logic, the Romanian social assistance system was perceived to benefit of a certain relief, as many of the low skilled that left Romania were fighting the poverty trap and depended on social assistance. They were expected to be a supplementary burden on the social assistance systems of their host countries. In this sense, an extended analysis of the public discourse regarding the Romanian emigrants in the media from UK and France (using the press reviews from the Romanian Embassies in the two countries and the online archives of the journals with the highest circulation) acknowledges the magnitude of negative perceptions (see Călbează, 2014).

### **3. SURVEY RESULTS – PERCEPTIONS AND BEHAVIOURS OF THE POOREST OF THE POOR REGARDING MIGRATION**

In this context, the results obtained through a 2016 survey developed by the National Scientific Research Institute for Labour and Social Protection (data collection subcontracted), in a project with focus on the beneficiaries of guaranteed minimum income, generated further interest for a more in-depth analysis regarding poverty effects on migration decision and mobility. The guaranteed minimum income is a social assistance benefit granted to the poorest of the poor, for poverty alleviation. It is a means tested benefit, granted to those with income per household situated below a threshold. In 2016, the guaranteed minimum income threshold was established at 142 lei for households consisting of one person, 255 lei for households consisting of two persons, 357 lei for households consisting of three persons, 442 lei for four persons households

and 527 lei for five persons households. For households with more than five members, the social aid quantum was increased with  $0,073 \cdot \text{ISR}$  (Social Reference Indicator = 500 lei). There were 241992 guaranteed minimum income beneficiaries in Romania, according to the data of the National Statistics Institute for July 2016. The survey's purpose was to assess the views of this category on issues such as poverty causes, as well as best ways to tackle it, both in terms of individual strategies to escape poverty and in terms of measures to be taken and implemented at local level or national level by policymakers and local administration. For this survey, a representative sample on the beneficiaries of the guaranteed minimum income of working age was created, at a 95% confidence level, with a maximum margin of error of 4%. We used multistage stratified random sampling, taking into consideration the distribution of beneficiaries on counties and areas of residence (urban/rural). After that, the localities and households were selected randomly. The sample had a volume of 600 respondents. The data collection took place during the 3<sup>rd</sup>-17<sup>th</sup> of October 2016, with the aid of 40 interview operators. The research methodology was developed by the authors of this paper, but sampling and data collection were subcontracted. Data analysis and interpretation belong to the authors. As migration is largely presented as the strategy to escape poverty in Romania, the survey also approached this issue. While we have expected to find a higher number of people in our representative sample (of the most impoverished Romanians) to had accessed in the past this strategy of work migration for poverty alleviation or to be part of households that receive remittances, this was, surprisingly, not the case. In fact, only 9.2% of the 600 respondents declared to have ever lived abroad for work or other reasons. This means 55 persons out of the sample of 600 people. Out of these 55 persons, about half of them had lived abroad for less than a year (24 people). Only 7 people had lived abroad for 5 years or more. These results seem plausible, as they support the idea that the returned migrants have gained the means and the skills to escape the poverty trap, thus explaining why they could not be found in the situation of needing the social aid for the guaranteed minimum income. It was also unexpected that only 2.2% of respondents received money from abroad in the month previous to data collection (13 people out of the 600 people of the sample). This might be a case of underreporting of received remittances, due to the fact that adding money to the household income might interfere to the entitlement of receiving the social aid benefits. Yet, we believe that it is not the case for this sample, as the respondents were informed of the complete confidentiality of the information and data collected in the survey and there was openness to offer other potentially problematic information. But, while objectively, migration, as means of poverty reduction, was hardly accessed to improve the situation of the very impoverished families surveyed, subjectively it is perceived as the key individual strategy for escaping poverty. In fact, 82.5% of respondents agreed that, for most of the poor, work migration is the only way to escape poverty. Thus, almost 500 of the 600 respondents considered migration to be the only way to escape poverty, with 254 persons (thus 42.3%) strongly agreeing to this statement (Fig. no. 1).

*Figure following on the next page*

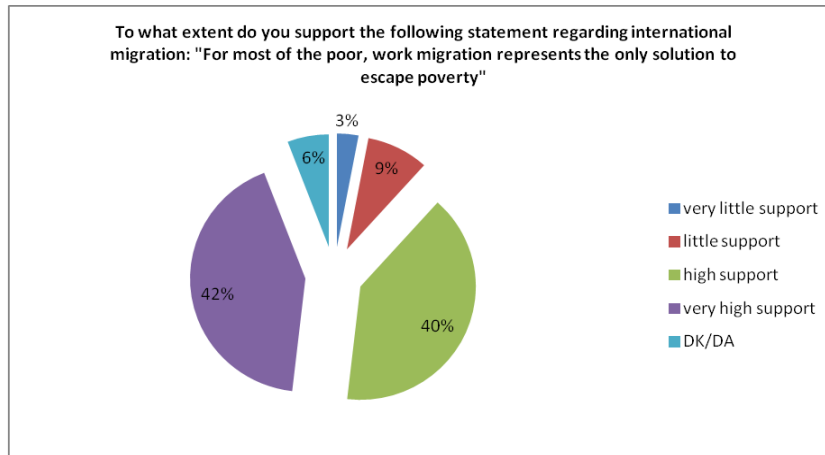


Figure no. 1: Perceptions on migration as a solution to escape poverty (INCSMPS Survey)

Also, the role of remittances as a poverty reduction mechanism is widely acknowledged by the respondents. In fact, 79.3% of the respondents agree that money earned by those that work abroad help the families remaining in the country to escape poverty, with 39% strongly agreeing to this statement (Fig. no. 2).

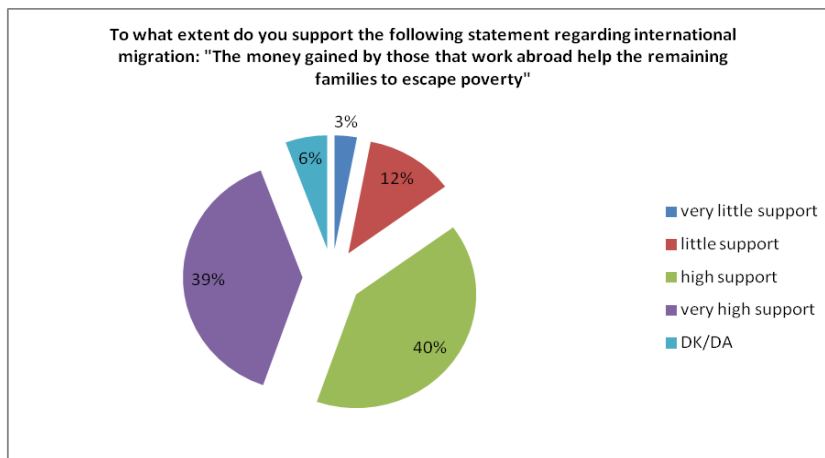


Figure no. 2: Perceptions on remittances' role for escaping poverty (INCSMPS Survey)

Thus, although not benefitting from remittances themselves, they perceive them as a strong instrument for poverty reduction. It is clear that they consider migration to have a positive effect from the perspective of poverty alleviation, as they see it as a means to escape poverty for those that leave, also with positive effects for the families left behind, alleviating, through remittances, to a certain extent, the poverty burden. Yet, when asked about their personal strategies to escape poverty, "what they think they should do to escape poverty", only 3.3% of respondents think that the solution of work migration could be applicable for their individual cases. We wanted to explore further this issue. Other questions of the survey offered relevant information. Although 58.8% of respondents agreed that "people should remain in their native country and contribute to its development", over 40% of the sample did not agree to this statement, thus not reinforcing a kind of moral obligation as a reason for immobility (Fig. no. 3).

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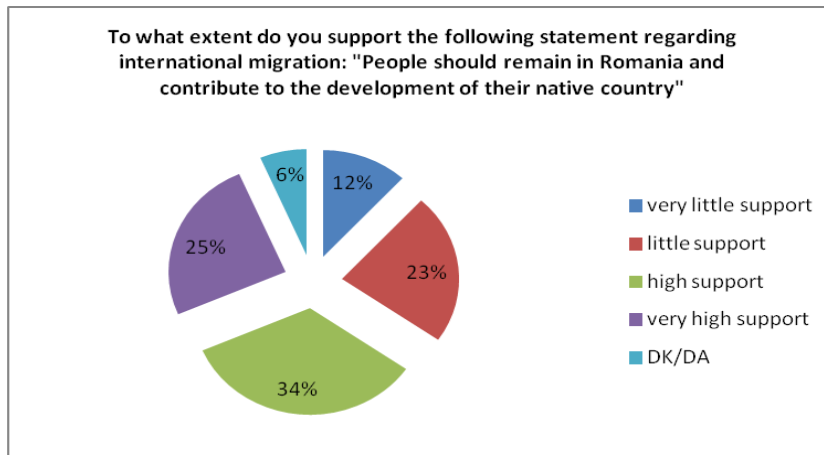


Figure no. 3: Perceptions on citizens' responsibilities for their country's development (INCSMPS Survey)

Yet, 78.8% of respondents acknowledge the negative effects migration might have on family life, being especially hard for the children and older parents of those who decide to work abroad (Fig. no. 4).

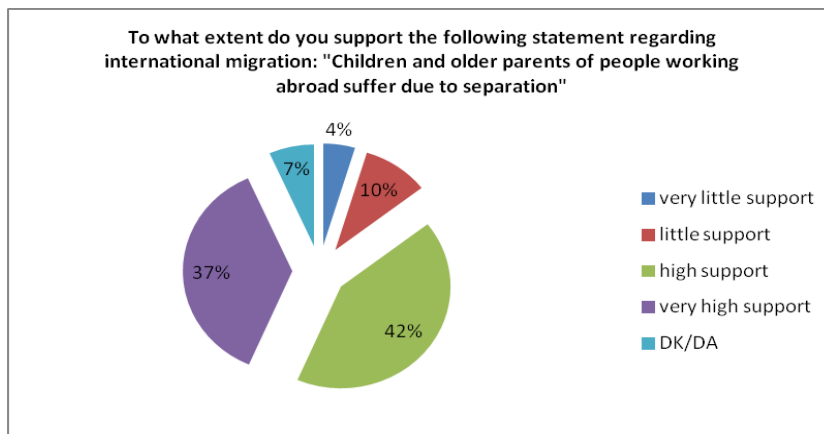


Figure no. 4: Perceptions on the negative effects of migration on family life (INCSMPS Survey)

The socio-economic data are important in understanding the results. All respondents of the sample are of working age, with 48.3% of respondents in the 31-50 age group, 12% of respondents in the 18-30 age group, while 39.7% of respondents are in the 51-65 age group. The sample is composed of 43.8% male respondents and 56.2% female respondents. The structure of the sample by educational attainment of respondents is also relevant. Most of respondents have gymnasium studies (8 school years), while a relatively large share of respondents only have 4 years of schooling. There is a high share of respondents (13.8%) that have no formal education at all. In fact, 40% of respondents have been to school for four years or less. What are the reasons for the apparent contradiction between perceptions and actions, for this group, the poorest of the poor, when they seem to have reasons to migrate as their current state in their country of origin is of deep poverty and they do see migration as the approach for an improved quality of life and yet they didn't embark on that road and they do not see it as applicable to them in the future? These results made us search for an appropriate explanation, as they were somewhat contradictory and counterintuitive. Thus, an in-depth research of the scientific literature was required in order to find an appropriate explanation for this matter of facts.

#### 4. POVERTY AND MIGRATORY AGENCY – WHY DO THE POOR STAY?

The rational-choice theory, built on the idea that decision making is based on an exhaustive and informed analysis of the costs and benefits of choice variants, can be applied to the migration phenomena: “if benefits outweigh the costs of migration, we can expect migration to occur; likewise, if costs outweigh benefits, we can expect people to stay” (Schewel, 2015, pp. 8). But, beyond theory, migration is a nuanced phenomenon. In fact, many decide not to migrate, although it would make sense economically to do so, it would be economically rational to leave, yet they chose to stay (see Hammar & Tamas, 1997, cited by Schewel, 2015). Carling (2002) introduced the term of “involuntary immobility”, referring to people that wish to migrate, but they cannot act towards this wish, due to a multitude of reasons. This contribution, emphasizing the distinction between the aspiration of a better life through migration and the capability to access it, was used in the scientific literature for a more complex and thus more realistic migration categorisation (Haas, 2014). Haas (2014) created an integrative frame for the different informational elements offered by theories conceptualising different forms of migration as a function of migration capabilities and migration aspirations. He considers that migration aspirations develop depending on people’s general life aspirations and perceived spatial opportunity structures. Migration aspirations are built upon subjective representations of both life at present location and life at destination. In his view, capabilities influence aspirations, as when there are slight positive developments in life standards and lifestyles, people become more aware of the fact that a better life exists and it is within reach, thus increasing aspirations. The taxonomy of migration as a function of aspirations and capabilities offers necessary inputs for better understanding the decisions of the poor in terms of mobility or immobility (Table no. 1).

Table no. 1: Migration capabilities and migration aspirations (Haas, 2014, pp. 32)

Migration capabilities			
		Low	High
Migration aspirations (intrinsic and/or instrumental)	High	<b>Involuntary immobility</b> (Carling 2002) (feeling ‘trapped’)	<b>Voluntary mobility</b> (most forms of migration)
	Low	<b>Acquiescent immobility</b> (Schewel 2015)	<b>Voluntary immobility and Involuntary mobility</b> (eg refugees, ‘soft deportation’)

It is obvious from the matrix above that low migration capabilities generate immobility, regardless of people’s aspirations. The poor don’t migrate, even though they might gain a lot in terms of quality of life through this process. The author shows that “the poorest often only migrate if forced by conflict or disasters, and then mainly move over short distances, while the extremely poor are often deprived of the possibility to move at all” (Haas, 2014, pp. 27). The concept of “acquiescent immobility” was introduced by Schewel (2015) in order to highlight the fact that some people may not want to migrate regardless of their migration capabilities, thus they may face difficulties to engage in migration due to socio-economic constraints, but, in the same time they do not have the desire to migrate. The term, the author argues, implies the acceptance of constraints (the Latin origins of the word meaning “to remain at rest”). Schewel (2015) focused her research on identifying the non-economic motivations that influence migration decision-making processes, especially in the case of poorer populations that would gain economically from migrating. She discovered that the preference to stay is generally positively related to being married and having children and negatively related to



having only primary level of education. Other factors, such as gender, age, household financial situation and rural/urban settings were not identified as significant predictors of the preference to stay in the case of young adults. The identified “retaining factors” were family ties, the patriotic desire to contribute to the development of their own country, as well as received information on difficulties of migration and migrant lives. In fact, the taxonomy emphasizes the role of scarce resources in influencing the migration behaviours of the poor. Sometimes the poor simply cannot bear the costs of migration and they are economically forced to immobility or they enter the route of a dangerous, “precarious” migration, exposing themselves to risks of exploitation. The idea of “acceptance of constraints” emphasized through the concept of “acquiescent immobility” can be theoretically associated to works of other authors that point out the effects of poverty on aspirations. Empirical studies suggest that there is a certain association between poverty and a lower level of aspirations. The poor may feel incompetent and unappreciated, without hope that their lives might improve (World Bank Report, 2015). This mental framing hinders their ability to take advantage of possible opportunities, thus missing chances to escape poverty also due to aspirations’ deficits (Appadurai, 2004; Ray, 2006; Duflo, 2012; Guyon and Huillery, 2014). Ray (2006) introduced the concept of “aspiration window”, populated with tangible, similar individuals that can be subject of identification. “As an economic agent who desperately seeks to escape poverty, I will emulate, imitate, and learn from the economic strategies of those in my neighbourhood income or wealth group” (Ray, 2006, pp. 3). A person extracts its own aspirations by witnessing the lives, desires, ideals and successes of those from its own aspiration window. Ray (2006) considers that future oriented behaviour, depends not so much on aspirations or the standard of living experienced by the individual, but rather on the existence of an aspiration gap of certain characteristics. “The aspirations gap is simply the difference between the standard of living that’s aspired to and the standard of living that one already has.” (Ray, 2006, pp. 3) His model demonstrated clearly that individual investment efforts are minimal for both high and low aspiration gaps. “Individuals whose aspirations are closely aligned to their current standards of living have little incentive to raise those standards. However, individuals whose aspirations are very far away from their current standards of living *also* have little incentive to raise standards, because the gap will remain very large before and after. A lot of investment will only cover a small part of the way: the overall journey is too long, and therefore not worth undertaking in the first place.” (Ray, 2006, pp. 4) From this perspective, for the very poor, the gains from migration could be marginal, as while changing the territory, they might find themselves continuously trapped in precarious living, mainly due to their lack of education and skills. Yet, there are recent experimental proofs that suggest the fact that changing the frame/filter through which the poor perceive themselves and their situation, can be associated to favourable and noticeable behavioural changes and positive results in terms of poverty reduction (World Bank Report, 2015). Lately, the economic decision making processes in poverty situations became central in research interests. Research in the field of behavioural economics shows that the poor are prone to behaviours that maintain and feed their poverty – non take-up of benefits, risky financial behaviours, insufficient investment in education and training for them or their children, etc. (see Haushofer and Fehr, 2014). “Poverty may, in particular, lower the willingness to take risks and to forgo current income in favor of higher future incomes. This may manifest itself in a low willingness to adopt new technologies and in low investments in long-term outcomes such as education and health, all of which may decrease future incomes. Thus, poverty may favour behaviours that make it more difficult to escape poverty.” (Haushofer and Fehr, 2014, pp. 862) The authors brought together a multitude of research studies showing that “poverty has a causal effect on risk-taking and time-discounting” and they explain that negative income shocks that are a common feature of life in poverty and the expectancy of liquidity constraints are the reasons for these preferences, together with limited access to crediting. Behavioural economics

research on poverty experimentally demonstrated that the poor are confronted to cognitive depletion, due to their strong focus of attention on the immediate challenges that life in poverty imposes on them, thus leaving them with less mental space or bandwidth to deal with issues that are of great importance and represent important investments for the improvement of their situation, but require planning, in-depth analysis of multiple variants for decision making, or maybe solving complicated, not so straight forward problems (see Mullainathan and Shafir, 2013). Migration is a demanding process in terms of planning, researching and making well informed decisions. People confronted to poverty imposed limitations focus most of their resources – economic, but also psychological – to solving day to day poverty generated challenges. These exhausting limitations consume the resources needed for planning and preparing for migration complexities. This may also function as a possible explanation for the reduced mobility of the poor, as migration might be perceived as a rather risky approach, certainly including more uncertainty than remaining in the well known situation, even if the present situation is far from satisfactory.

## 5. CONCLUSION

Migration represents an important strategy for poverty alleviation in the mental models of the poor in Romania. Thus, migration aspirations are strong, although the poor are well aware of the sacrifices/costs it implies, especially through the break of family ties and due to the vulnerability of those left behind, most often the children and the elderly. The “duty to contribute towards the development of their country” is not a strong retaining element. Yet, while migration is seen as the “only way” to escape poverty, only 3.3% of respondents actually think about the possibility of leaving the country in the future. It seems that poverty is a limiting factor in exercising migratory agency, in Romania, but also elsewhere. Maybe the poorest of the poor are completely blocked in exercising their migratory agency due to their profound lack of economic resources. Of course, it would be very easy to say that they decide to remain due to the fact that, although they evaluate the benefits to be significantly higher than costs, they simply cannot afford to bear the costs. So they understand their potential gain, but since they simply can't sustain the costs, they cannot act towards their potential gain. Here we talk about perceived gain, as many of the respondents consider that migration is the only way to escape poverty. The perception is not necessarily a fair reflection of reality, as, especially due to their lack of skills, prospective gains, even abroad, could be assignable towards the lower side of the spectrum. When migration is seen as an investment for the survival and improving of the living standard of the family, family members may put together resources in order to facilitate migration for their designated member, thus overcoming seemingly unbearable costs. Decision making for migration is a complex process and even more difficult for the poor. There are reasons to believe that, besides “involuntary immobility” determined by a deficit of resources, there could be some other explanation for the reduced mobility of this group. The scientific literature offers information on experimental studies that bring much needed insight on what decision making could be like in a situation of scarcity. Cognitive depletion, risk aversion and time discounting are a few of the answers offered empirically, by the newly developed domain of behavioural economics. The poverty induced tax on the mental bandwidth of the individuals might be associated to a lack of cognitive resources needed for planning the complex migration process, with its high risks and high uncertainty level. The fact that poverty is associated to a stronger manifestation of risk aversion could also explain why people overlook the potential gains that migration might bring, though they are perceived to be high. Time discounting, identified as a behavioural pattern often associated to poverty, means that the poor are mainly focused on present satisfaction of needs and wants, rather than investing in future gains.

This reluctance to invest, which was identified through research, could be determined by the perceived large gap between the present state and the desired state, too large to be potentially covered with the in-reach investments the poor are capable to make to improve their situation. The fact that migration is seen as the only way out of the poverty situation shows a certain lack of trust in the programs and policies for poverty alleviation that are presently implemented in Romania.

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## CORPORATE SOCIAL RESPONSIBILITY AND MARKET ENTRY

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### ABSTRACT

*Is the firms' decision to pursue social interest and promote social progress philanthropic or motivated by strategic reasons? Making use of a simple Spence-Dixit entry model entry game in the presence of homogeneous goods, this paper studies the possible anticompetitive effect of the adoption of Corporate Social Responsibility (CSR) in the form of "consumer friendliness" (i.e. firms' attention to consumers' welfare). It is shown that, when the market becomes contestable, the incumbent can endogenously select to adopt CSR to hamper to a greater extent the potential entrant, regardless of its choice to engage in CSR activities. In other words, CSR can become a strategic barrier to entry. More precisely, when entry is considered, the incumbent's choice to follow CSR reduces the sunk cost thresholds that block and deter the entrant's market access, and remarkably shrinks the relevant area of the parameters set in which the incumbent accommodates entry. In other words, market entry is relatively more blockaded and deterred in an industry with CSR. However, it is also shown that, if the fixed costs are sufficiently small, embracing reasonably low CSR rules is a dominant strategy for the entrant which, in such a way, improves its profitability. These findings open a new view of CSR rules and seem to provide a plausible explanation of the empirical evidence that firms following CSR rules are increasingly present in several industries. Moreover, this assertion seems to support the sentiment of the participants in public and academic debates, in which a large majority express the opinion that CSR can give companies a competitive advantage, and social responsibility is a real business issue.*

**Keywords:** CSR, Entry deterrence, Monopoly, Duopoly

### 1. INTRODUCTION

In recent decades, the adoption of corporate social responsibility (CSR) activities has become an undeniably prevailing global business practice. Indeed, according to KPMG, only 23 percent of the top 100 companies surveyed in 45 countries have reported the accomplishment of CSR activities in 2002; those figures have grown to 73 percent in 2015. Moreover, with regard to the 250 Global Fortune Index companies (the world's 250 largest companies), the same figures have increased from 45 percent to 92 percent (KPMG 2005, 2015). As a consequence, the appearance of the CSR business practice has increasingly raised the debate among policy makers (e.g. European Commission, 2001) and scholars (e.g. Baron, 2001, 2009; Jensen, 2001; Goering, 2007, 2008, 2012; Lambertini and Tampieri, 2010; Benabou and Tirole, 2010). In fact, from a purely economic perspective, the rationale for companies to engage in CSR activities seems to be rather puzzling; the conventional wisdom, based on the rationality principle of "homo economicus", is that deviation from the standard profit-maximizing objective leads to an unprofitable outcome for firms. In other words, according to the first principles of economics, corporations are only responsible to their shareholders; consequently, their only aim is to maximize the shareholders' returns (see Friedman, 1970). Thus, taking an economic standpoint, this paper investigates if, instead of the commonly perceived (and believed) philanthropic reason, a strategic rationale exists for companies to adopt CSR

behaviours. In doing so, this paper develops a simplified version of the Spence-Dixit model of competition that allows for investigating whether and how CSR activities affect the incumbent and a potential market entrant's strategic decisions in an industry. In his pioneering work, Spence (1977) studies the strategic choice of an incumbent firm with regard to its capacity in the presence of a potential entrant in an industry. The author makes the explicit distinction between capacity and output: the capacity the incumbent invests represents a constraint on the quantity produced. If the entry costs are adequately low for the potential entrant, the incumbent accommodates entry. With entry threat, the incumbent can set up a sufficiently large capacity and, eventually, expand output to drive down the price and thus deter market entry. However, the capacity remains underutilized if entry does not occur. Dixit (1980) extends the analysis of the role of an irreversible investment commitment as an entry deterrence tool to alter the initial conditions of the post-entry game to the incumbent's advantage. In contrast to Spence (1977), Dixit (1980) finds that, if firms agree to play the post-entry game according to the Nash rules, the incumbent does not install additional capacity that could be left idle in the pre-entry phase. Shy (1995) proposes a simplified version of the Spence-Dixit model in which an incumbent can accumulate capacity and other forms of capital that allow firms to compete aggressively. Thus, when the potential entrant observes the incumbent's capacity (or capital accumulation), the former considers the choice of the latter in the post-entry profitability calculations. However, the incumbent can prevent entry by using the first mover advantage strategically and engaging in capital accumulation. Given this game structure, entry can be: 1) blockaded, if the entrant stays out, even though the incumbent's action equals what would be optimal (for the incumbent) if there was no threat of entry; 2) deterred, if the entrant does not enter the market because the incumbent chooses an action that would be suboptimal (from the incumbent's perspective) if there was no threat of entry; and 3) accommodated, if entry takes place and the incumbent adapts his behavior adjusting to entry. However, none of those contributions consider the presence of firms adopting CSR behaviors. Scholars have analysed the companies' choice to adopt CSR activities in different forms. A large strand of the literature attributes the firms' involvement in CSR activities to the fact that consumers appreciate such activities (e.g. Manasakis et al., 2013, 2014; Graf and Wirl, 2014), shareholders exhibit social concerns (e.g. Baron, 2008), or other social agents apply pressure on firms regarding CSR activities (e.g. Baron and Diermeier, 2007). Manasakis et al. (2013, 2014) and Graf and Wirl (2014) assume that consumers cherish a CSR firm's products, and therefore they are willing to pay a price higher than for non CSR-type firms' products. Baron (2008) supposes that firms adopt CSR either because consumers reward this choice or because the shareholders and management care for social activities (or both). On the other hand, according to Baron and Diermeier (2007), political and social activists influence the business environment by pressing firms to engage in social activities. In fact, their goal is typically to influence companies and industry practices. Other works assume that the choice of adopting CSR behaviours can be justified by strategic reasons, and the level of CSR engagement can be either exogenously given (e.g. Goering, 2007; Lambertini and Tampieri, 2010, 2012; Fanti and Buccella, 2017) or endogenously determined, by one firm (e.g. Kopel and Brand, 2012; Goering, 2012) or all the firms in the industry (Brand and Grothe, 2013, 2015; Planer-Friedrich and Sahm, 2016). In particular, in a simple Cournot duopoly model with differentiated goods, Fanti and Buccella (2017) show that the strategic nature of the adoption of exogenously given CSR rules can explain the emergence of different equilibria (i.e. all firms adopt CSR rules, all firms do not follow CSR rules, asymmetric equilibria), depending on the degree of product differentiation. On the other hand, Kopel and Brand (2012) find that, in a mixed duopoly in which only one firm is of CSR type, the endogenous choice of the CSR engagement level can lead to the emergence, in equilibrium, of a situation in which both firms delegate output decisions to a manager and the appearance of the "prisoner's dilemma".

Planer-Friedrich and Sahm (2016) present the paper closest to the present contribution. Those authors consider a symmetric Cournot competition with homogeneous goods in which all firms strategically engage in endogenously determined CSR activities. They show that, in equilibrium, the chosen level of CSR is positive and implies smaller equilibrium profits. Moreover, the authors build a simplified Dixit-Spence entry game model to analyse the impact of CSR on potential entry. Noteworthy is that the incumbent can strategically choose to adopt CSR to deter market entry if the entry costs for the entrant are intermediate, while it accommodates entry when those costs are low; however, given its first-mover advantage, the incumbent engages in CSR levels higher than those of the entrant. As in Planer-Friedrich and Sahm (2016), the paper develops a Shy-version approach of the incumbent-entrant game to analyze the anticompetitive effect of CSR activities. However, this paper differs from the above-mentioned contribution in several ways. While Planer-Friedrich and Sahm (2016) assume that both the incumbent and the entrant endogenously select the CSR level, in the present work, CSR rules are exogenously given by the “customary toughness” of the stakeholders in the industry. In other words, the incumbent and the entrant face a binary choice: not to engage in CSR or to engage at the exogenously given level. Given this game structure, the key results of the present paper are as follows. The incumbent can select to adopt CSR to hinder the potential entrant, irrespective of its choice to engage in CSR. In other words, the incumbent’s choice of engaging in CSR can evolve into a strategic barrier to entry because it shrinks the threshold levels of the fixed cost that block and deter the entrant’s market access. Remarkably, it reduces the area of the parameters’ set in which the incumbent accommodates entry. However, if the fixed costs are adequately small, engaging in reasonably low levels of CSR is a dominant strategy for the entrant that improves its profitability. Thus, these results can be of relevance to the current policy debate on firms’ CSR behaviours and of interest for antitrust and competition policies, presenting a new view on the firms’ rationale for adopting CSR. The rest of this paper is organized as follows. Section 2 introduces the Dixit-Spence entry game model with CSR rules, and the analysis discusses the issue of entry in this context. The last section concludes our findings.

## 2. THE MODEL AND THE RESULTS

The model considers a standard entry game in which firms produce homogeneous goods for the market; firm 1 is the incumbent, and firm 2 the entrant. Post-entry competition is on quantity and takes place à la Stackelberg. Both firms decide whether to engage in CSR activities. As is known, CSR activities can be classified into different types (see e.g. Katsoulakos et al., 2004). However, in the present context, the firms’ social concerns is interpreted as care for consumers; one characteristic of a CSR-type firm is to be aware of the consumer’s surplus; i.e. the model considers consumer-friendly CSR activities. Thus, each firm, in its objective, maximizes profits plus a fraction of the consumer’s surplus  $k_i \in [0,1]$ ,  $i = 1, 2$ , where  $k$  is exogenously given and rely on the customary toughness of the stakeholders’ participation in governance, incorporated in the firm's objective function, and not due to the choice of the profit-maximising owners. This assumption is in line with the results of the empirical study of Spitzeck and Hansen (2010). Those authors find that the stakeholder engagement mechanism is principally circumscribed to advisory over dialogue and issues, while the strategic choices of the company are outside their sphere. Stakeholders influence the firm’s objective when competing on the product market; however, private owners make the company’s strategic choices. As a consequence, in the present model, the firms’ strategic choice is whether to adopt CSR behaviours. In other words, the (incumbent and entrant) firms’ owners can make a binary choice: either  $k = 0$  in the case of profit maximisation or a given positive  $k$  in the case of adoption of CSR. Given that the firms compete for the same clients, it is reasonable to assume that the level of CSR stakeholders’ request is identical for both companies.

## 2.1. Monopoly

Following the above discussion, the objective function of the CSR-type firm is specified as a simple parameterised combination of profits and consumer surplus. For operational reasons, the monopoly outcomes are presented first. The inverse, linear demand function is  $p = a - q_1$ , where  $a$  is a demand parameter fixed for analytical convenience to the unity. Profits and consumer surplus are, respectively,

$$\pi_1 = pq_1, \quad (1)$$

$$CS = \frac{q_1^2}{2}, \quad (2)$$

where  $p$  is the price of goods and  $q_1$  denotes the (incumbent) monopolist output. To focus on the impact of the adoption of CSR in this industry, the marginal cost is set to  $c = 0$  for analytical tractability and without loss of generality. An alternative interpretation of the latter condition can be the presence of a competitive labor market in which firms can hire workers at the competitive wage, normalized to zero. Thus, the CSR objective function ( $W$ ) is (see e.g. Goering 2007)

$$W_1 = \pi_1 + k_1 CS = (1 - q_1)q_1 + k_1 \frac{q_1^2}{2} \quad (3)$$

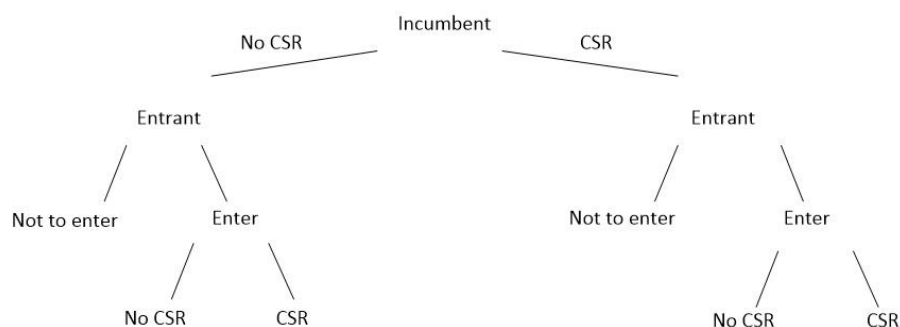
where  $k_1 \in [0,1]$  is what the incumbent CSR firm assigns to consumer surplus. Maximization of (3) yields  $q_1^M = \frac{1}{2}$ , the optimal output for the incumbent monopolist. Substitution of the optimal output into (1) leads to the monopolist profits,  $\pi_1^M = \frac{1}{4}$ , where the upper script  $M$  stands for "Monopoly".

## 2.2. Output choice in the Spence-Dixit model

This subsection examines the decision of being engaged in CSR activities and the output choice of the incumbent and entrant in the simplified Spence-Dixit framework (Spence, 1977; Dixit, 1980) proposed by Shy (1995, pp. 188-192).

As a consequence, in duopoly, the demand function becomes  $p = 1 - q_1 - q_2$ . Thus, the incumbent and the entrant firms' profit function and consumers' surplus are defined by

Figure 1: Structure of the game





$$\Pi_1 = pq_1 \quad (4)$$

$$\Pi_2 = pq_2 - F \quad (5)$$

$$CS = \frac{(q_1 + q_2)^2}{2}. \quad (6)$$

The term  $F > 0$  represents an exogenous fixed cost that the entrant faces. The game has a two-stage structure. During pre-play (stage 0), the incumbent decides whether to engage in CSR. Subsequently, at stage 1, the incumbent fixes its output  $q_1$ . At stage 2, after observing the incumbent's move, the entrant chooses whether to enter and, in such a case, whether to engage in CSR activities and its own production level  $q_2$ . In the case of no-entry,  $q_2 = 0$ . As usual, the game is solved with backward induction. Figure 1 depicts the structure of the game.

The general formulation of the model is presented, from which, assigning the precise value to the parameters  $k_i, i=1,2$ , all possible strategic configuration can be derived. The market clearing price when they produce at full capacity is  $p = 1 - (q_1 + q_2)$  and  $p = 0$  if  $1 \leq (q_1 + q_2)$ . As a consequence, the incumbent objective function is

$$W_1 = \pi_1 + k_1 CS = (1 - q_1 - q_2)q_1 + k_1 \frac{(q_1 + q_2)^2}{2}, \quad (7)$$

and profits are

$$\pi_1 = (1 - q_1 - q_2)q_1 \text{ if } 1 > (q_1 + q_2) \quad (8a)$$

$$\pi_1 = 0 \text{ if } 1 \leq (q_1 + q_2). \quad (8b)$$

For the entrant,

$$W_2 = (a - q_1 - q_2)q_2 + k_2 \frac{(q_1 + q_2)^2}{2} - F \quad (9)$$

while profits are

$$\pi_2 = (1 - q_1 - q_2)q_2 \text{ if } q_2 > 0 \text{ and } 1 > (q_1 + q_2) \quad (10a)$$

$$\pi_2 = -F \text{ if } q_2 > 0 \text{ and } 1 \leq (q_1 + q_2) \quad (10b)$$

$$\pi_2 = 0 \text{ if } q_2 = 0. \quad (10c)$$

Without threat of entry, the incumbent sets the output level  $q_1$  like a monopolist. Thus, the incumbent maximizes (3), which leads to the equilibrium output level,  $q_1^M = \frac{1}{2 - k_1}$  and profits

$\pi_1^M = \frac{1 - k_1}{(2 - k_1)^2}$ . If firm 1's output level is  $q_1^M = \frac{1}{2 - k_1}$ , the maximum profit that firm 2 can earn

in the case of entry is obtained by solving the problem in (9), which leads to  $\pi_2 = \frac{(1 - k_1 + k_2)[1 - k_1(1 - k_2) - 2k_2]}{(2 - k_1)^2(2 - k_2)^2} - F$ . Thus, for  $F \geq F^B \equiv \frac{(1 - k_1 + k_2)[1 - k_1(1 - k_2) - 2k_2]}{(2 - k_1)^2(2 - k_2)^2}$ ,

entry into the industry is blockaded (the upper script  $B$  stands for blockaded). A direct

comparison with the case of standard goods ( $k_1 = k_2 = k = 0$ ) reveals the following result. Result 1. CSR behaviours lower the threshold of the fixed cost that block entry with respect to standard goods. In other words, the presence of CSR makes entry more blockaded. Nonetheless, the incumbent can deter the competitor from entering the market through the strategic decision of producing a suboptimal output level with respect to the case of no threat of entry. When  $F < F^B$ , if the incumbent ignores the possibility of entry of the competitor and keeps the monopoly output, entry will occur. However, if it chooses to produce a sufficiently high output level, the competitor will find entry unprofitable. Therefore, for  $F^{ED} < F \leq F^B$ , entry is deterred with the incumbent setting the threshold output level  $q_1^{ED}$  (in which ED stands for entry deterrence), such that the entrant is indifferent between entry into the industry or staying out. On the other hand, if the level of the fixed costs is adequately low, i.e.  $F \leq F^{ED}$ , entry occurs, and the incumbent and entrant realizes profits  $\pi_i^A, i=1,2$  (where A stands for accommodated).

Table 1: Relevant payoff expressions in the four possible strategic configurations  
 (Authors' own calculations)

	Incumbent's monopolist profits	Incumbent's entry deterrence quantity, $q_1^{ED}$	Incumbent's entry deterring profits	Incumbent and entrant's accommodating profits, $\pi^A$	Fixed cost threshold, blockaded entry $F^B$	Fixed cost threshold, deterred entry $F^{ED}$
Incumbent and entrant no CSR ( $k_1 = k_2 = 0$ )	$\pi_1^M = \frac{1}{4}$ $\pi_2^B = 0$	$q_1^{ED} = 1 - 2\sqrt{F}$	$\pi_1^{ED} = 2\sqrt{F}(1 - 2\sqrt{F})$ $\pi_2^{ED} = 0$	$\pi_1^A = \frac{1}{8}$ $\pi_2^A = \frac{1}{16} - F$	$F = \frac{1}{16}$	$F = \frac{3}{32} - \frac{\sqrt{2}}{16}$
Incumbent no CSR, entrant CSR ( $k_1 = 0; k_2 = k$ )	$\pi_1^M = \frac{1}{4}$ $\pi_2^B = 0$	$q_1^{ED} = \frac{2 - 2k + k^2 - (2-k)\sqrt{4F(1-k) + k^2}}{2(1-k)}$	$\pi_1^{ED} = \frac{[(2-k)\sqrt{4F(1-k) + k^2}]}{4(1-k)^2}$ $\pi_2^{ED} = 0$	$\pi_1^A = \frac{(1-k)^2}{4(2-k)}$ $\pi_2^A = \frac{(1-k)(1+2k-k^2)}{4(2-k)^2} - F$	$F = \frac{1-k-2k^2}{4(4-4k+k^2)}$	$F = \frac{6-15k+2k^2+18k^3-14k^4+3k^5-(4-6k+6k^2-2k^3)\sqrt{(1-k)^2(2-k)(1+k-k^2)}}{4(1-k)(2-k)^4}$
Incumbent CSR, entrant no CSR ( $k_1 = k; k_2 = 0$ )	$\pi_1^M = \frac{1-k}{(2-k)^2}$ $\pi_2^B = 0$	$q_1^{ED} = 1 - 2\sqrt{F}$	$\pi_1^{ED} = 2\sqrt{F}(1 - 2\sqrt{F})$ $\pi_2^{ED} = 0$	$\pi_1^A = \frac{(1-k)(2-k)}{(4-k)^2}$ $\pi_2^A = \frac{(1-k)^2}{(4-k)^2} - F$	$F = \frac{(1-k)^2}{4(2-k)^2}$	$F = \frac{12-6k+3k^2-(4-k)\sqrt{8-4k+5k^2}}{8(4-k)^2}$
Incumbent and entrant CSR ( $k_1 = k_2 = k$ )	$\pi_1^M = \frac{1-k}{(2-k)^2}$ $\pi_2^B = 0$	$q_1^{ED} = \frac{2 - 2k + k^2 - (2-k)\sqrt{4F(1-k) + k^2}}{2(1-k)}$	$\pi_1^{ED} = \frac{[(2-k)\sqrt{4F(1-k) + k^2}]}{4(1-k)^2}$ $\pi_2^{ED} = 0$	$\pi_1^A = \frac{(1-2k)(2-2k+k^2)}{(4-3k)^2}$ $\pi_2^A = \frac{(1-2k)(1+k-k^2)}{(4-3k)^2} - F$	$F = \frac{(1-3k+k^2)}{(2-k)^4}$	$F = \frac{12-24k-5k^2+29k^3-13k^4-\sqrt{2}(1-k+k^2)(3k-4)-\sqrt{8-11k^2+8k^3}}{2(4-3k)^2(2-k)^2}$

The straightforward standard, though tedious, calculations lead to the results in Table 1, reports the relevant expressions for the incumbent and entrant's profits and the fixed costs thresholds for the entrant under the four possible strategic configurations.<sup>1</sup> A first, close observation of the outcomes in Table 1 shows that, when both firms engage in CSR, the non-negativity constraint on profits implies  $k \leq .5$ , i.e. firms cannot have excessive social concerns. To ensure an overall analysis, the above inequality is assumed to hold for the rest of the paper. With the outcomes in Table 1, it is then possible to construct Figure 2, which depicts, in the left box, the threshold levels of the entrant's fixed costs that block and deter market entry when the incumbent does not engage in CSR and, in the right box, the threshold levels of the entrant's fixed costs that block and deter market entry when the incumbent engages in CSR. Those threshold levels generate six regions in each graph, and through the evaluation of the payoffs obtained in each of them, the entrant chooses its strategic move.

<sup>1</sup> Because of space constraint, the analytical derivations of the results in Table 1 are omitted here. However, all of the detailed calculations can be obtained from the authors upon request.

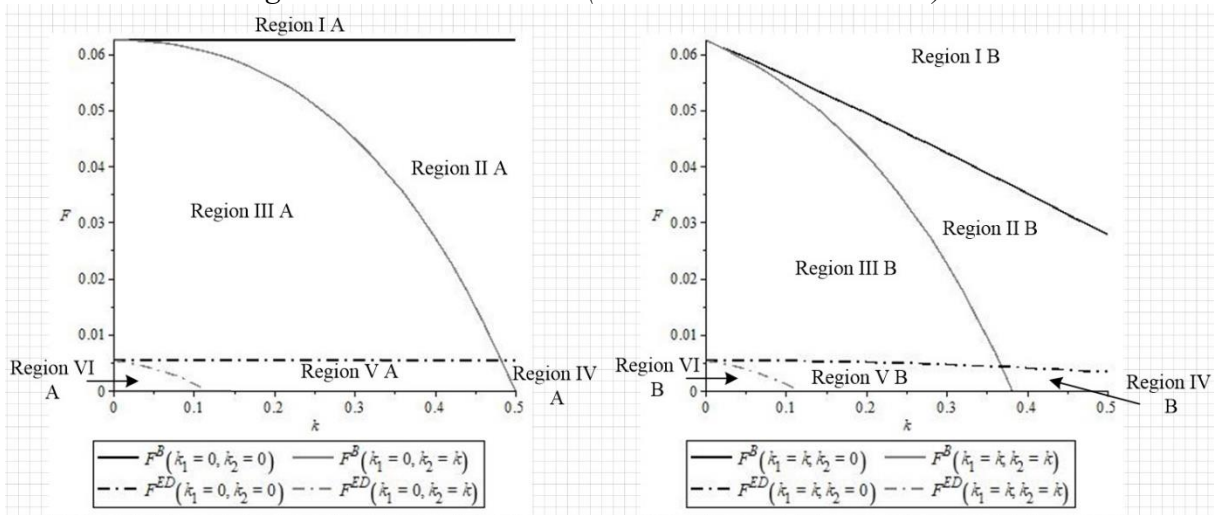
To derive the sub-game perfect equilibria of the game, let us start with the analysis when the incumbent does not engage in CSR ( $k_1 = 0$ ). When the incumbent chooses not to engage in CSR, firm 2 gets  $\pi_2 = 0$  in Region I A, II A, and III A, because either entry is blockaded due to high fixed costs, or the incumbent can deter strategic entry through a sufficiently high output. On the other hand, in Region IV A, it is  $\pi_2^A(k_1 = k_2 = 0) > \pi_2^B(k_1 = 0, k_2 = k) = 0$ ; therefore, the entrant selects not to engage in CSR activities. In Region V A,  $\pi_2^A(k_1 = k_2 = 0) \geq \pi_2^{ED}(k_1 = 0; k_2 = k) = 0$ , and the entrant chooses no CSR. Finally, in Region VI A,  $\pi_2^A(k_1 = 0; k_2 = k) > \pi_2^A(k_1 = k_2 = 0)$ , and the entrant engages in CSR activities.

Let us consider now the case in which the incumbent engages in CSR ( $k_1 = k$ ). When the incumbent adopts CSR rules, the entrant gets  $\pi_2 = 0$  in Region I B, II B, and III B, because, as above, either the fixed are sufficiently high to block entry, or the incumbent strategically deters entry, thus expanding production. On the other hand, in Region IV B, it is  $\pi_2^A(k_1 = k, k_2 = 0) > \pi_2^B(k_1 = k_2 = k) = 0$ ; therefore, the entrant chooses not to engage in CSR. In Region V B,  $\pi_2^A(k_1 = k, k_2 = 0) \geq \pi_2^{ED}(k_1 = k_2 = k) = 0$ , and the entrant selects no CSR. Finally, in Region VI B, one obtains  $\pi_2^A(k_1 = k_2 = k) > \pi_2^A(k_1 = k, k_2 = 0)$ , and the entrant engages in CSR. From the above analysis, a preliminary inspection reveals the following result.

Result 2. For a level of the fixed cost  $F \geq F^{ED}(k_1 = k_2 = 0) = \frac{3}{32} - \frac{\sqrt{2}}{16}$ , entry never occurs, irrespective of the strategic choice of the incumbent whether to engage in CSR behaviours: in fact,  $\pi_2 = 0$  in all four possible strategic configurations:  $(k_1 = k_2 = 0)$ ,  $(k_1 = 0; k_2 = k)$ ,  $(k_1 = k; k_2 = 0)$ , and  $(k_1 = k_2 = k)$ .

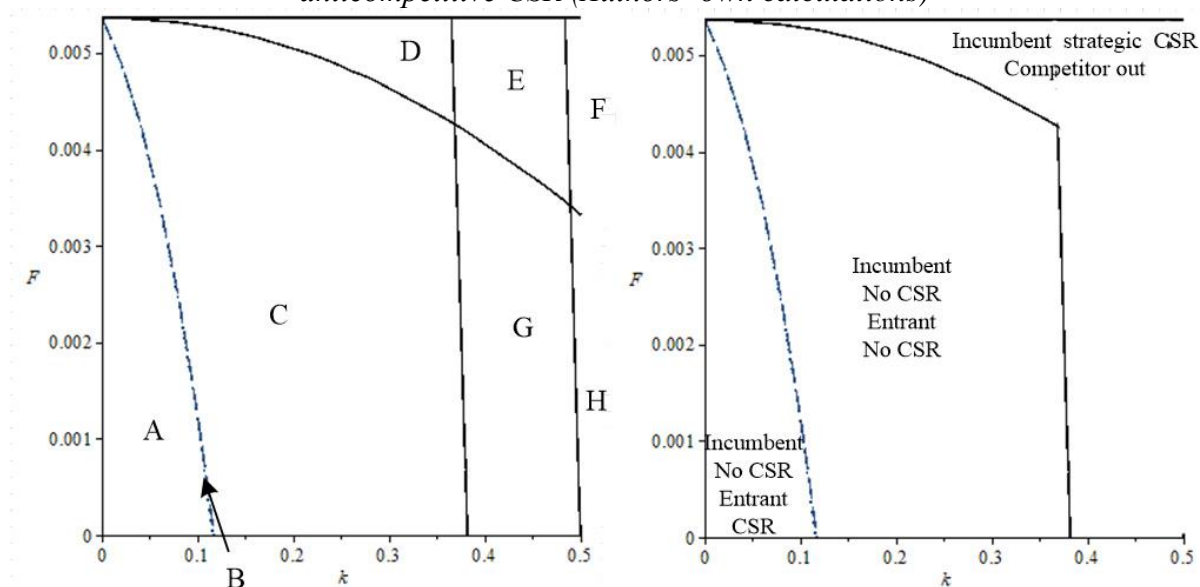
Therefore, for fixed-cost  $F \geq F^{ED}(k_1 = k_2 = 0)$ , i.e. the fixed costs' entry deterrence threshold in a standard industry without CSR, entry does not take place irrespective of the strategic choice of the incumbent. In this case, the adoption of CSR behaviours undoubtedly has an impact on the incumbent's profit levels; however, it has no particular anticompetitive effects.

Figure 2: Threshold levels of the fixed costs for the entrant. Left box: incumbent no CSR. Right box: incumbent CSR (Authors' own calculations)



To see how the incumbent can exploit CSR to expand its dominant position, let us now analyse the case of the  $F < F^{ED}(k_1 = k_2 = 0)$ . Overlapping the left and right boxes in Figure 2, it is possible to obtain Figure 3, characterized by 8 regions. In Region A, the entrant selects CSR regardless of the incumbent moves; adopting CSR is the entrant's dominant strategy. Therefore, to decide its strategy, the incumbent compares the accommodating profits with and without CSR; given that  $\pi_1^A(k_1 = 0, k_2 = k) > \pi_1^A(k_1 = k_2 = k)$ , the incumbent does not engage in CSR. In the narrow Region B, the entrant chooses no CSR when the incumbent does, while it selects CSR when the incumbent does not. Therefore, the incumbent evaluates  $\pi_1^A(k_1 = k, k_2 = 0)$  and  $\pi_1^A(k_1 = 0; k_2 = k)$ . Given that  $\pi_1^A(k_1 = 0; k_2 = k) > \pi_1^A(k_1 = k, k_2 = 0)$ , the incumbent does not adopt CSR.

Figure 3: Left box: relevant regions for the incumbent's strategic choice. Right box: anticompetitive CSR (Authors' own calculations)



In Region C, no CSR is the dominant strategy for the entrant; therefore, given that  $\pi_1^A(k_1 = k_2 = 0) > \pi_1^A(k_1 = k, k_2 = 0)$ , both firms do not engage in CSR. In Region D, the entrant does not engage in CRS when the incumbent does not engage as well; however, the entrant stays out of the market if the incumbent adopts CSR behaviours. Because  $\pi_1^{ED}(k_1 = k, k_2 = 0) > \pi_1^A(k_1 = k_2 = 0)$ , the incumbent can strategically engage in CSR to deter entry and keep up its dominant position: in this case, CSR behaviours have a clear anticompetitive effect. Region E is characterized as follows: the entrant chooses no CSR when the incumbent selects no CSR as well; however, entry is blockaded if the incumbent selects CSR. Because  $\pi_1^M(k_1 = k_2 = k) > \pi_1^A(k_1 = k_2 = 0)$ , the incumbent strategically adopts CSR to keep out the potential competitor. Again, CSR has an anticompetitive effect. In Region F, the entrant does not engage in CSR when the incumbent chooses no CSR; however, entry is blockaded if the incumbent chooses to adopt CSR behaviours. Because  $\pi_1^M(k_1 = k, k_2 = 0) > \pi_1^A(k_1 = k_2 = 0)$ , the incumbent chooses CSR as a strategy to deter the competitor's market entry. In Region G, the entrant selects no CSR regardless of the strategy the incumbent plays; however, entry is blockaded if the incumbent chooses CSR.

Because  $\pi_1^M(k_1 = k, k_2 = 0) > \pi_1^A(k_1 = k_2 = 0)$ , the incumbent anticompetitively chooses CSR as a strategy to deter the competitor's market entry. Finally, in Region H, the entrant chooses no CSR irrespective of the incumbent's choice; nonetheless, entry is blockaded if the incumbent applies CSR. Because  $\pi_1^M(k_1 = k, k_2 = 0) > \pi_1^A(k_1 = k_2 = 0)$ , the incumbent strategically selects CSR to deter the competitor's entry. From the above analysis, the following results arise.

Result 3. For a level of the fixed cost  $F < F^{ED}(k_1 = k_2 = 0)$  the equilibria of the game are as follows: 1) for low levels of the parameter  $k$ , the entrant's dominant strategy is to engage in CSR while the incumbent does not; 2) for intermediate values of  $k$ , both firms do not engage in CSR; and 3) if  $k$  and  $F$  are adequately high, the incumbent can strategically engage in anticompetitive CSR to deter market entry and maintain its dominant position.

The rationale for part 1) of result 3 is that the engagement in CSR activities expand output, and therefore it allows the entrant to capture the incumbent's market shares, thus increasing profitability. However, the level of CSR engagement does not have to be too large, otherwise the price declining effect due to large production overcomes the positive direct effect of output expansion on revenues. Thus, provided that also the fixed costs are adequately low, the effect of the following CSR rules is that of accelerating product market competition, similar to the logic behind delegation games with non-unionized workers (e.g. Fershtman and Judd, 1987). On the other hand, part 3 of result 3 shows that, when the level of CSR becomes sufficiently high, the incumbent, via output expansion, can anticompetitively either exploit the negative effect on prices to deter entry or lower the threshold level that blocks entrance. These results may have noteworthy consequences in terms of insights for antitrust and competition policies. Indeed, CSR activities can be a strategic deterrence tool that may create or further facilitate the persistence of dominant positions. However, a cautionary note is required here. The findings of this work are based on precise assumptions such as the presence of homogeneous goods, linear demand function, and zero marginal costs. Thus, the findings of the current work definitively call for robustness check.

### 3. CONCLUSION

Making use of a basic version of the Spence-Dixit entry game with homogeneous products, this work has analyzed the potential anticompetitive effect of the engagement in consumer-friendly CSR practices. The paper has shown that, in a contestable market, the incumbent can strategically choose to engage in CSR activities to hinder further the potential entrant, irrespective of its choice to adopt CSR. That is, when the fixed cost levels are adequately low to allow entry accommodation in the standard model, the incumbent can use CSR as a strategic barrier to entry to keep up its dominant position. In fact, CSR reduces the fixed-cost thresholds that block and deter the entrant's market access and notably restricts the significant area of the parameters' set in which the incumbent accommodates entry: market access is more blockaded and deterred than in a standard industry without CSR. A noteworthy result is that, if the fixed costs are adequately low, engagement in fairly limited CSR activities is the entrants' dominant strategy to increase profits. These findings can shed light on the empirical evidence that companies, notably large corporations, following CSR rules are increasingly present in several industries. Moreover, this result seems coherent with the sentiment of the participants in academic and public debates in which a large majority express that CSR can actually represent a competitive advantage for companies and that CSR is a real business practice (The Economist Intelligence Unit, 2013).

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## THE FINANCIAL INDICATORS INFLUENCING THE MARKET VALUE OF THE ROMANIAN LISTED COMPANIES AT THE REGIONAL LEVEL

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### **ABSTRACT**

*The paper seeks to identify the contribution of turnover of listed companies in the economic development of the regions where they operate and the financial factors that influence their market value. Empirical research began with a descriptive regional analysis of the companies and after that, a panel data analysis on a group of companies listed on the BSE in the period 2011-2016 was conducted using a multiple linear regression model that quantified the variation of market value depending on financial indicators like total assets, total liabilities, total impairment respectively distributed dividends was build. The research results emphasize the existence of a direct correlation between the analyzed indicators and it highlights the role of the set of internal factors in determining financial decisions of listed companies with significant macroeconomic effects.*

**Keywords:** *development region, financial indicators, financial statements, market capitalization, market value*

### **1. INTRODUCTION**

The companies listed on the stock exchange represent an important segment in any economy, and the way in which companies manage their business, reflected in the obtained results represents an important factor in establishing the transaction cost and the number of transactions. The Romanian listed companies are concerned with becoming more appealing by drawing as many investors as possible, which is one of the main objectives of Bucharest Stock Exchange (BSE). In Romania listed companies are located in throughout the country, which means that their activity contributes to the development of the economic region they belong to. Thus, the evolution of their activity influences the price at which their shares are quoted, as well as their contribution to regional development. It is widely known that the transaction price of shares at stock exchange can be influenced by endogenous and exogenous factors. Thus, the internal factors are represented by indicators found in annual financial reports whose correlation with stock price has been extensively discussed in the literature (Ball and Brown, 1968; Penman, 2003). The external factors are determined by: the inflation rate and the movement of the world market index (Caner and Onder, 2005), the speculative information, exchange and interest rates (Abugri, 2008); the economic news regarding unexpected events (Khositkulporn, 2005, p. 33); the interdependence between international financial markets and the evolution of commodity price; the macroeconomic fiscal and monetary policies (Bilson et. al., 2002); financial crisis (Cingula and Yongqiang, 2015, p. 29). Also, there are endogenous non-financial factors that could influence the market value of the companies, like the size of them (Matias



and Serrasqueiro, 2017; Charlo et al., 2017) and the structure of ownership (Talebna et al, 2010; Yu, 2013). We can say that the internal factors objectively express the intrinsic value of companies as a point of reference in establishing its market value and therefore they are the ones we focused on. This paper is organized as follows: section two contains a short literature review regarding regional development and market value, while the third section presents the research hypotheses and describes the research methodology. The fourth section presents the main findings of our study and the last section concludes and gives some future research directions.

## **2. LITERATURE REVIEW**

The economic performance of a region varies considerably due to several factors: good conditions for production factors, important support for the development of industries, strong local demand and a competitive regional framework. Porter (2003) analyzed the competitiveness and competitive advantages at firm and regional level, and the competition between companies and regions and concluded that, for regional development states (governments) should focus on decentralization policies and cluster development. Regional development is a main concern of governments and of the European Union. Most reviews and studies for Romania use as main indicators the number of employees by region, competitiveness, regional GDP (Pelinescu et al., 2017; Antonescu, 2013; Cismas et al. 2011). Regional GDP is determined by using the regional indicators, and applying a methodology which makes the distinction between uni-regional and multi-regional units. In the compilation process of regional GDP there are difficulties in the allocation between regions of all operations of multiregional units following the methodological requests and practical solutions that are adopted (Ivan-Ungureanu, 2003, p. 304). The necessity of an analysis of financing systems at the regional development level is mentioned by Wójcik (2009). The regional disparities regarding the territorial distribution of the stock-listed companies are a characteristic that is present in most countries, but in some developed countries there is the proposal of establishing and developing regional exchanges (Huggins and Prokop, 2013). Klagge and Martin (2005) performed an analysis of the centralized against decentralized financial systems and they said that "the spatial structure of capital markets might affect the provision and distribution of equity to SMEs across regions". They also conducted a comparison between the structures of capital markets and regional distribution of equity for SMEs in the UK and Germany. To measure stock market development in the majority of studies the ratio of market capitalization of listed companies to GDP is used (Beck and Levine, 2004). Levine and Zervos (1998) point out that market capitalization is not good for predicting economic growth, while other studies demonstrate that market capitalization influence economic growth (Chang and Pak, 2017; Zu et al. 2016). The market value of listed companies is a continuous concern of research made in the field of economics, mainly research which studied the effectiveness of the stock market (Fama, 1970) showing that a perfect market does not exist, that certain situations may return over time and persist for a short period of time (Malkiel, 2003). The researchers of the financial markets were also preoccupied with the empirical study of asset pricing that could influence future innovations (Campbell and Shiller, 1998; Campbell, 2014). Kothari (2001) conducted a synthesis of empirical research on the relationship between the stock market and the companies' financial statements, showing the topics of current interest to researchers as being the following: „tests of market efficiency with respect to accounting information, fundamental analysis, and value relevance of financial reporting". The value of a company is determined on the basis of the information from the financial and accounting reports. The relevance of the financial statements is a main concern of the accounting profession and is the object of several studies (Amir et al., 1993; Barth et al., 2008). Thus, the relevance of accounting information in the case of companies listed on the BSE has been analyzed through a regression model which showed

that the financial information is relevant for investors, but significantly differs in time, and from one company to another (Jaba et al. 2016). Another important and influential factor mentioned in most studies in the field of capital structure (Rajan and Zingales, 1995) is the size of the enterprise. In Romania, most companies fall into the category of SMEs, about 99.65% of them, according to the European classification applied by the National Institute of Statistics (based on the number of employees and turnover). Istitieh and Rodríguez-Fernández (2006) consider that the size of a company has a positive effect on leverage. Campos, Jareno and Tolentino (2016) used the model of Fama to point out the influence of interest rates on listed companies in the US by size, showing that company size is important, being regarded as a competitive disadvantage for SMEs. In this context, our study wants to contribute to the existing literature by highlighting the particularities of Romanian companies listed on the stock market and their influence in the key macroeconomic indicators, like GDP.

### 3. MATERIALS AND METHODS

The empirical research begins with a descriptive regional analysis of the companies. The data series for all the indicators were manually collected from the Bucharest Stock Exchange and verified with the official data from the Romanian Ministry of Public Finance to control for reliability and reduce the risk of biases. The regional GDP was taken from data supplied by EUROSTAT database. In order to obtain a higher degree of comparability, the analyzed period starts from the year 2011, because 2012 was the first year the companies have to report their individual financial statements under IFRS and they had to retreat their financial statements for 2011 to have comparable data. Based on the literature, we tested three research hypotheses:

- H1. There is a significant correlation between the market capitalization and the turnover (as percent of regional GDP) of the listed companies at the regional level.
- H2. There is a significant influence between the financial indicators and the market value of the listed companies at a national and regional level

The studied population, for the first hypothesis, consists of all the companies listed at BSE, from which we excluded all the financial institutions (due to their field of activity) and the ones that are suspended. As a result our analysis is based on: 65 entities in 2011, 64 entities in 2012, 66 entities in 2013, 65 entities in 2014 and 63 entities in 2015 and 2016. To test the second hypothesis, we changed the number of the companies analyzed. From all the companies we excluded the ones that lack data and those that are not listed throughout the studied period. As result, 53 companies have been used in the model. For each of them, financial data regarding the values of: total assets, total impairment, total liability, turnover, number of shares and their market price at 31 December, was manually collected from the Bucharest Stock Exchange. The most used indicators to assess the market value of listed companies are price earnings ratio (PER) and price to sales (PS). A lower rate of PER means a quicker recovery of the initial investment through profit, which is desired by the investors (Nicholson, 1960; Ball, 1978). PS rate can be used in case the company records losses and is a good tool for predicting the future evolution (Fisher, 1984; p. 75; O'Shaughnessy, 2005, p. 142). Given that profit is determined by the difference between income and expenditure we have deemed necessary for the model to contain an income element, the turnover, and one of the expenditure element, like the impairment value of assets. We calculated Price to sales (PS), as a ratio between market capitalization and turnover. Similar to all ratios, the PS ratio experiences a great variation from sector to sector, so when it is being used to compare companies belonging to the same sector, it is at its highest relevance. We created a dummy variable, dividend (Div), which takes the value 1 if the companies distributed the dividends and 0 if not. Also we included in the model two non-financial indicators as control variables. The first one is ownership (own), a dummy

variable that takes value 1 if the company has a majority private shareholder and 0 if the majority of shareholders are state-owned. According to their size, by criteria from the European definition, we split the companies in Small and Medium Enterprises (SME) and Large Companies (LC) and created a dummy variable, size, that takes value 1 if the company is LC and 0 if the company is SME. To build the econometric model, we have started with the hypothesis according to which the value of a company is mostly affected by their performances, like generating profit. The paper seeks to assess the statistical significance of the financial indicators that influence the market value of the listed companies, carrying on a linear regression with panel data containing 318 observations of the 53 companies for a period of 6 years. All the financial independent variables were converted to natural logarithm. The econometric model we tested in this research is:

$$PS_{it} = \alpha_i + \beta_1 Assets_{it} + \beta_2 Impairment_{it} + \beta_3 Liability_{it} + \beta_4 Div_{it} + \beta_5 Size_{it} + \beta_6 Own_{it} + \varepsilon_{it} \quad (5)$$

Where,  $\alpha_i$  represents the unknown intercept of every company,  $\beta_{1-6}$  are the coefficients of each explanatory variable,  $\varepsilon_{it}$  is the error term,  $i=1-53$  companies and  $t$  represents the years analyzed (2011-2016). The first phase of the empirical study is observing the main influences of financial indicators over the economic activity of companies using descriptive statistics and variables dynamics. In order to see which independent variables have a persistent influence on market value of the companies, we use Harris–Tzavalis test to check for stationarity, Breusch–Pagan and Modified Wald to test for heteroscedasticity and we calculated the variance inflation factor (VIF) for the independent variables to test for multicollinearity. After that, we applied Pesaran CD test to check for cross-sectional dependence and Wooldridge test to verify if there is a first-order autocorrelation in the panel data. After all the tests were performed, we decided to use Prais–Winsten correlated panels corrected standard errors regression (PCSEs). Then, we applied the regression model for all the companies and for the 8 development regions in Romania: Bucharest-Ilfov, Center, North-East, North-West, South-East, South-Muntenia, South-West Oltenia and West region. We classified the entities by region, based on the location of their headquarters (head office). The testing and estimation of regression model has been carried out using Stata 13 software.

#### 4. RESULTS AND DISCUSSION

To validate the first hypothesis we made a descriptive analysis of the situation of the non-financial listed companies in the period 2011 – 2016. The Figure 1 shows the average regional distribution of the number of the listed companies at BSE. Most of them, 23% in average in the whole period, are located in Bucharest-Ilfov region, and only 2% are located in West region. In the other regions the share of companies is between 11% and 16%.

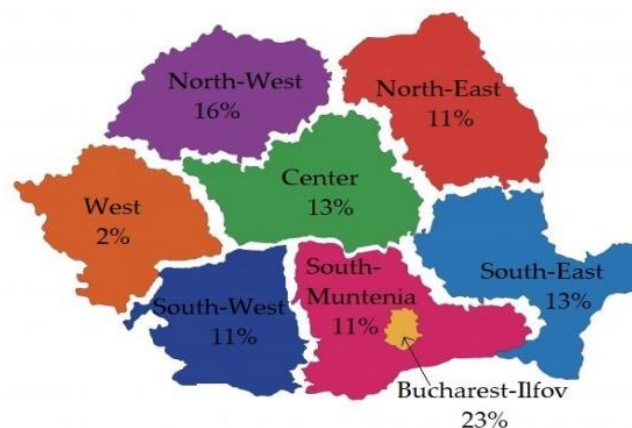


Figure 1. The distribution of listed companies, by development regions

We calculated the percent of the market capitalization and the turnover in the regional GDP for all eight regions and also for Romania. At national level, comparing the contribution of turnover of the all companies to the regional GDP, we noticed that, in average, the Turnover/regional GDP ratio was 7.18%. The biggest ratio is in the South-East region, 16.58% (where there are in average 8 companies) and Bucharest-Ilfov, 12.67% and the lowest ratio is in West region, 0.36% and North-East, 0.97%. We observe that the Turnover in the South-East region has a bigger proportion in the regional GDP, even if in this region are less listed companies. From the Bucharest Stock Exchange Director's Consolidate Report for 2016 results that the stock market capitalization of all Romanian listed companies' represents approximately 10% of GDP, from which a third is hold by the financial institutions. The market capitalization of the companies from our study was, in average, 6.68% of GDP. The regions that recorded values above this average were Bucharest-Ilfov (15.23%) and Center (15.21%). The lowest market capitalization rate was in the West region (0.05%) and North-West (0.59). To determine if there is a significant correlation between the market capitalization and the turnover of the listed companies, as share of the regional GDP, we calculated three correlation coefficients (Table 1). We obtained a Pearson coefficient of 0.55 which means that there is a moderate correlation between the ratios (this result is supported also by Spearman and Kendall coefficients). For a more detailed analysis we split the regions in two groups: in the first one we included the regions that recorded values above average at market capitalization (Bucharest-Ilfov and Center) and in the second group there are the other six regions.

Table 1. The results of correlation tests (p-values are reported in parenthesis)

Total			Group 1			Group 2		
Pearson	Spearman	Kendall	Pearson	Spearman	Kendall	Pearson	Spearman	Kendall
0.55	0.80	0.57	0.53	0.45	0.30	0.79	0.78	0.56
(0.000)	(0.000)	(0.000)	(0.076)	(0.137)	(0.192)	(0.000)	(0.000)	(0.000)

For the first group the Pearson coefficient was 0.53 which indicates a moderate correlation and it is the only significant one at 10% level of confidence. For the second group we obtained higher correlation coefficients that were validated by all three tests which indicate a stronger correlation (0.79) between the market capitalization and the turnover of the listed companies who recorded values less than the average. The market capitalization value of listed companies registered high grow rates in the period 2011-2014 (Figure 2) and after that, from 2015 to 2016 started to decrease, in situation that GDP had a continuous growth in all the period. Turnover follows the same trend as market capitalization: from 2011 to 2014 it registered low growth rates and from 2015 started to decline. One reason for this situation was the reduction of the number of listed companies by the fact that in 2015 more companies have entered into insolvency than have started to be listed at BSE. The listed companies should have taken the risk prevention measures (Imbrescu et al. 2009).

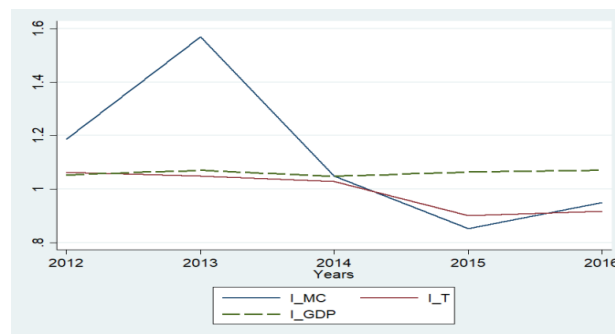


Figure 2. The dynamics of the GDP and the Market capitalization and Turnover of the listed companies

Observing this situation we tested the third hypothesis, to highlight the factors that influenced the most the dynamics of the value of the listed companies and if this is validated for all the regions in Romania. For the econometric analysis of the financial indicators that influence market value of listed companies, we start with a basic analysis of panel data from which we obtained the average, the lowest and the highest values of the variables, in the studied period for all the companies.

Table 2. Descriptive statistics (\*\*- 5% level of significance, \*\*\*- 1% level of significance)

Variable	Obs.	Mean	Std. Dev.	Min	Max	HT unit root test (z)
Ln_Assets	318	19.05	1.52	16.25	24.48	-2.20**
Asset (mil RON)	318	1282.2	548	11.48	43174	-1.98**
Ln_Impairment	318	15.50	1.83	11.92	22.46	-5.66***
Impairment (mil RON)	318	77.3	44.2	0.15	5682	-11.72***
Ln_Liability	318	17.63	1.74	13.74	22.66	-5.90***
Liabilities (mil RON)	318	326.2	108	0.92	6961	-2.70***
Dividends	318	0.46	0.49	0	1	-11.03***
Size	318	0.43	0.49	0	1	-9.85***
Ownership	318	0.88	0.31	0	1	-9.85***
PS	318	0.91	1.01	0.014	6.63	-12.39***

In average, for all companies, the PS ratio was 0.91; the maximum value was 6.63 and the minimum 0.014. In a study that refers only to the listed companies that registered profit, a similar PS ratio was obtained (0.96) (Hategan and Curea-Pitorac, 2017). The ratio is desired to be as low as possible, for the investment to be attractive. Total assets were in average 1282.2 million RON (19.05 in natural logarithm), total impairment was 77.3 million RON (15.50 in natural logarithm), total liability was 326.2 million RON (17.63 in natural logarithm) and companies that distributed dividend were in average 46%. In our group there are in average 43% large companies and 57% SMEs. From all of them, 88% have a majority of private shareholders.

We began the econometric analysis with the unit root test for all the variables, the Harris–Tzavalis test for stationarity was validated for all of them at 5% level of confidence (the results are presented in Table 3).

Table 3. The correlation matrix

	1	2	3	4	5	6	7
1 ps	1						
2 ln_asset	0.0068	1					
3 ln_imp	-0.0727	0.9401	1				
4 ln_liab	-0.1469	0.8861	0.8218	1			
5 dividends	0.0160	0.2002	0.2150	0.0203	1		
6 size	-0.0666	0.7006	0.6603	0.6003	0.2699	1	
7 ownership	-0.0244	-0.3743	-0.3486	-0.2169	-0.3455	-0.2879	1

In Table 4 the correlations between all the variables from this study are presented. Our dependent variable, PS was positively correlated with assets (0.006) and dividends (0.016) and negatively correlated with impairment (-0.072), liability (-0.146), size (-0.066) and ownership (-0.024) and the biggest correlation was with liabilities.

*Table 4. The results of the statistic tests applied on the model*

<b>Mean VIF</b>	<b>Breusch-Pagan / Cook-Weisberg</b>	<b>Hausman test</b>	<b>Modified Wald test</b>	<b>Pesaran's test</b>	<b>Wooldridge test</b>
5.71	Chi2(1) = 98.39 Prob > chi2 = 0.0000	Chi2(4) = 23.82 Prob > chi2 = 0.0001	Chi2(53) = 3.2 Prob > chi2 = 0.000	7.031 Pr = 0.0000	F(1,52) = 0.383 Prob > F 0.5386

We performed an OLS regression in which we included all the independent variables and after that we tested for multicollinearity and obtained a mean VIF of 5.71, smaller than 7, thus deciding to keep all the variables. To validate the model we used Breusch-Pagan test for heteroskedasticity and obtained  $\chi^2(1)=98.39$  and P-value of 0.000, which is lower than 0.05, leading us to reject the null hypothesis of homoskedasticity or constant variance of the residuals for all observations.

After that we applied the Hausman test, we accepted the alternative hypothesis ( $\chi^2(4)$  was 23.82 with a p value of 0.000) that the regression with fixed effects estimation should be used. We applied this type of regression and we tested again for heteroskedasticity with the Modified Wald test obtaining a  $\chi^2(53)$  of 3.2 with a p value of 0.000 thus rejecting the null hypothesis. For checking cross-sectional dependence of the residuals we used Pesaran CD test but we couldn't accept the null hypothesis of independence (the p-value was 0.000).

Finally, we verified if there is first-order autocorrelation in our panel data using Wooldridge test and obtained an F(1,52) of 0.383 with a p-value of 0.5386 leading us to accept the null hypothesis of no first-order autocorrelation. In accordance with the results obtained from the aforementioned tests, the most appropriate regression is the Prais-Winsten correlated panels corrected standard errors regression (PCSEs). We analyzed the model for all the companies at national and regional level, with and without the control variables (size and ownership) (Table 5).

*Table following on the next page*

Table 5. The results of the regression model (\* - 10% level of significance, \*\* - 5% level of significance, \*\*\* - 1% level of significance)

Regions	Obs.	R2	Wald chi2	Assets	Impairment	Liability	Dividends	Size	Ownership
Total companies	318	0.53	1853.11***	0.66 (8.55)***	-0.26 (-2.98)***	-0.43 (-5.86)***	-0.17 (-2.88)**	-0.01 (-0.72)	-0.10 (-1.53)
	318	0.53	1679.33***	0.65 (8.97)***	-0.25 (-3.15)***	-0.43 (-6.04)***	-0.15 (-2.53)**		
Bucharest -Ilfov	72	0.57	99.24***	0.67 (3.08)***	-0.71 (-3.70)***	-0.03 (-0.28)	-0.04 (-0.11)	0.43 (1.00)	-0.23 (-0.44)
	72	0.57	96.53***	0.59 (3.20)***	-0.59 (-3.86)***	-0.05 (-0.30)	0.13 (0.40)		
Center	42	0.86	260.86***	-0.17 (-1.31)	0.16 (2.19)**	0.09 (0.86)	0.32 (1.66)*	0.06 (0.43)	-0.63 (-3.98)***
	42	0.79	165.07***	-0.16 (-1.16)	0.20 (2.85)**	0.02 (0.21)	0.73 (3.61)***		
North - East	42	0.85	256.42***	0.72 (4.49)***	-0.26 (-1.71)*	-0.49 (-2.81)***	0.26 (1.87)*	-0.09 (-0.36)	-0.39 (-1.43)
	42	0.83	211.09***	-0.56 (4.52)***	-0.23 (-1.67)*	-0.36 (2.23)**	0.26 (1.94)*		
North - West	60	0.58	83.68***	1.71 (3.82)***	-0.58 (-2.05)**	-1.01 (-3.94)***	-1.16 (-3.24)***	-0.54 (-1.13)	-3.74 (-0.64)
	60	0.57	80.44***	1.46 (5.25)***	-0.63 (-2.54)**	-0.92 (-4.08)***	-1.16 (-3.19)***		
South - East	42	0.88	326.74***	0.49 (4.77)***	0.001 (0.01)	-0.52 (-9.54)***	-0.16 (-1.83)*	0.16 (1.33)	0.54 (3.94)***
	42	0.81	190.09***	0.44 (3.56)***	0.007 (0.05)	-0.44 (-7.47)***	-0.16 (-1.76)*		
South - Muntenia	24	0.90	235.66***	1.12 (2.04)**	0.11 (0.41)	-0.75 (-3.32)***	-0.83 (3.76)***	-9.62 (-2.75)***	-8.68 (-2.66)***
	24	0.83	133.80***	0.02 (0.08)	0.53 (2.52)**	-0.44 (-1.84)*	-0.58 (-2.37)**		
South - West	30	0.89	249.30***	0.66 (2.79)***	-0.08 (-0.44)	-0.28 (-4.10)***	0.04 (0.60)	-0.55 (-2.15)**	-5.60 (-2.91)***
	30	0.85	179.10***	0.06 (0.43)	0.13 (0.84)	-0.16 (-2.73)***	0.07 (0.99)		

All the regressions are statistically significant; the values obtained for Wald chi2 were bigger than the threshold at 1% level of confidence, except for the West region for which we couldn't validate the model due to the fact that there is only one company. The R-squared for the model with all companies was 0.53 which means that all the independent variables could influence PS in a proportion of 53%. At a regional level we obtained higher values of R-squared (from 0.57 to 0.90) which shows a bigger correlation between the independent and dependent variable. We analyzed the regression model with and without the control variables to emphasize the influence of the financial indicators. There are no significant differences between the results obtained from the two models, except for the fact that R-squared is constant (for all companies and for Bucharest-Ilfov region) or lower in the models without the control variables. A negative correlation between the size of the companies and PS ratio was validated only in the models for South-Muntenia ( $\beta$  was -9.62) and South-West ( $\beta$  was -0.55) regions. Also, a negative correlation between the ownership and PS ratio was validated in the regions Center (-0.63), South-Muntenia (-8.68) and South-West (-5.60) and a positive correlation between them we obtained for the South-East region (0.54). The regression main results indicate that the value of total assets has an important direct influence over the price-to-sales ratio, except for the Center region (in both models) and South-Muntenia and South-West regions in the models without the control variables, where this indicator couldn't be validated. For all companies, the explanatory power of the variable is 0.66, which means that an increase with 1% of the total assets, PS ratio will increase by 0.66%.

The biggest coefficient was obtained in the model for North-West region, of 1.71 and the lowest in the model for the South-East region of 0.49. The negative correlation between PS and Impairment was validated for the model with all the companies and for the following regions: Bucharest-Ilfov, North-East and North West. In the model for Center and South-Muntenia (in the model without the control variables) we obtained a positive correlation validated at 5% level of confidence and for South-East and South West regions the indicator couldn't be validated. For all companies, the explanatory power of the variable is -0.26, which means that an increase with 1% of the impairment will lead to a decrease of PS with 0.26%. The results also have shown a negative correlation between the total liabilities and the dependent variable for all regions except Center. In the model for all companies, if the independent variable increases by 1% it will lead to a decrease in PS ratio with 0.43%. The dummy variable Dividends was validated and included in all models except for the Bucharest-Ilfov and South-West regions. A positive correlation was obtained in the Center ( $\beta$  was 0.32) and North-East regions ( $\beta$  was 0.26) and a negative correlation for the rest. If the companies give dividends, the PS ratio will decrease with 0.17%. The negative correlation between PS and dividends, it could be explained by the uncertainty of the distribution of the dividends.

## 5. CONCLUSION

The present paper aimed at identifying the contribution of listed companies' turnover to the regional GDP and another point of focus is statistical analysis of internal factors which influence the market value of companies listed on BSE. We validated the first hypothesis by obtaining a significant Pearson correlation coefficient (0.55) between the market capitalization and the turnover (as percent of regional GDP) of the listed companies at the regional level. Furthermore, for the first group of regions Pearson coefficient was 0.53 which indicates a moderate correlation and for the second group we obtained higher correlation coefficients (0.79). For the second hypothesis we obtained for all the companies a positive correlation between market value (Price-to-Sales ratio) and total assets and a negative correlation with impairment, liabilities and dividends, similar to a study by Fernandes et al (2016). If all the independent variables increased by 1%, the PS ratio will decrease by 0.2%. This is an expected outcome by the investors who seek lower rate in order to trade the shares. Testing the model for all the developing regions, not all the independent variables were found to be significant. One reason could be the low number of companies found in that specific region. Regarding the control variables, they have not been validated for all the companies and regions. The size of the company is only relevant in the regions South-Muntenia and South-West where a negative correlation with PS resulted. Between the control variable ownership and PS ratio we found a negative correlation in the regions Center, South-Muntenia and South-West and a positive correlation in South-East region (Talebnia et al. 2010; Yu, 2013). There are two reasons why this paper is contributing to the literature. We provide an extensive analysis of the listed companies' contribution to regional development and our econometric model is an alternative of the existing ones in the financial literature which could be consulted by the interested parties. The empirical results of this research are relevant for determining the endogenous factors that influence the market value of listed companies and therefore the management strategies of financing or the investors' strategies on the Romanian capital market. The impact of the financial performances of the companies from the analyzed panel, on the economic development, measured by GDP at national and regional level in Romania, highlights the need to involve macroeconomic policy makers to recreate the environment conditions of various sectors at regional level through regional financial markets (Huggins and Prokop, 2013). The paper also has its limits. The first one refers to the fact that we could not use a longer period, because of the implementation of IFRS, just the last four years. Second, we couldn't use PER as dependent variable, due to the large number of companies with losses.



The research model should be extended, taking into account on one hand, factors that characterize the institutional environment in which the analyzed firms operate, and on the other hand, a comparative analysis based on the size of companies and their activity sector.

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## THE HUMAN FACTOR IN IMPLEMENTING INNOVATION INTO INVESTMENT PLANNING

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### **ABSTRACT**

*An absolute imperative of increasing the effectiveness of planned investments is the implementation of innovative project solutions, as simple implementation reserves are no longer sufficient. Subject literature indicates the general conditions that compel the implementation of innovation, specified factors that encourage the implementation of innovation as well as their effect on the economy of production. To a lesser degree, the conditions for achieving high effectiveness in investment design solutions, whose value successively increases, have been researched. It is for this reason that discovering the factors that determine the implementation of innovation, in such a specific sector as investments design, is highly important. The analyses of the behaviour of the main participants of the investment process carried out in this article allow the identification of factors stimulating new solutions in investment planning, the barriers to implementing innovation and the degree to which they affect the effectiveness of investments. These factors determine the conditions for the development of production businesses, construction businesses and design studios to a large degree, as well as shape their competitiveness. In a broader context, they lead to a reduction in the social costs of investments made in the country.*

**Keywords:** *innovation, investor, investment and construction design, designer, construction sector*

### **1. INTRODUCTION**

Due to fierce market competition, businesses are forced nowadays to achieve a high effectiveness in all economic activities. In research and subject literature, the general conditions due to which businesses are forced to implement innovation are indicated, and factors encouraging the implementation of innovation and their effect on the economy of products are presented. However, the mechanisms of using innovation in the process of realising investment tasks and the conditions for achieving high effectiveness in investment design solutions, both in terms of functionality and cost, have been researched to a lesser degree. Currently when planning investment tasks, it is necessary to strive for more complex solutions, e.g. introducing innovative design solutions, as simple implementation reserves are no longer sufficient. Due to this, it is imperative to discover the factors determining the implementation of innovation in such a specific sector as investment planning. The nature and conditions of the functioning of the investment and construction market require detailed analyses of the main participants of the investment process, which will allow for the identification of factors stimulating new solutions in investment planning, barriers to the implementation of innovation and the degree to which they affect the effectiveness of investments. An important element of the implementation of

innovation is people participating in the investment process, who represent the investor, designer and contractor. Their skills, experience and competencies will decide about the correctness and rationality of design solutions, as well as the effectiveness of the whole investment task. These factors shape the conditions of development of production and construction businesses and design studios to a large degree, and determine their competitiveness. In a broader context, they lead to a reduction in the social costs of investments made in the country. The research problem in this article is to explain the role and effect of the main participants of the investment process - the investor, designer and contractor in introducing innovative design solutions, and their effect on the economics of investment projects. On the basis of surveys carried out by the authors of this paper, an overview of the relevant literature and analyses of case studies, factors affecting the possibilities and effects of implementing innovation in construction investment planning to the greatest degree were identified. Both factors from the market environment of the investment sector and internal conditions with a direct effect on the work of the investor, designer and contractor were taken into consideration.

## **2. THE INVESTMENT PROCESS AND INNOVATION**

The investment process is a complex and costly task, requiring many skills and consequences in striving to reach the desired goal. The actions and efforts made during this process concern not only purely technical issues, but also those related to organisation, planning, and logistics, directly linked to the investment. The large number of actions that must be undertaken and the ever-changing environment, as well as technological advances, make it necessary to optimise one's work and increase investment effectiveness by implementing innovation. Innovation has been defined as the introduction of a new or substantially improved product (good or service) or process, a new marketing method or a new organisational method (Oslo Manual, 2005). Innovation is linked to knowledge and available technologies. Innovation is also linked inseparably with change and novelty. Innovation concerns both products and services. The theory of innovation was implemented into economic studies by the Austrian economist J. Schumpeter, who deemed that the innovation of businesses has a greater impact than capital on economic development, while an entrepreneur is anyone who is new combinations (Schumpeter, 1960).

In subject literature there are many classifications of innovation. These make research into the innovativeness of economies and businesses possible (Olszański, Piecha 2012). Taking into consideration the criterium of the area of business which innovation concerns, they can be separated into four main groups (Pomykalski, 2001):

- functional - satisfy new, previously undisclosed social needs, catering to new functions;
- object-based - introduce new objects in the place of those used previously, which fulfil their purpose considerably better;
- procedural - introduce new methods of production, which make production more efficient, making it cheaper and bringing about an improvement in working and environmental conditions;
- organisational - streamline the organisation of work and production, improve health and safety conditions.

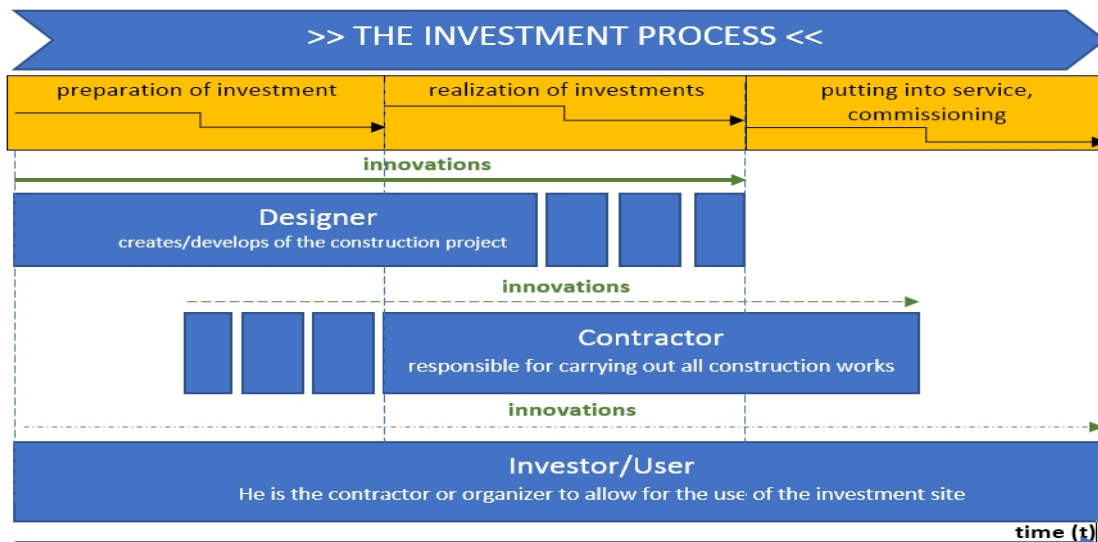
Innovation is currently regarded as the driving force behind economies and a factor in gaining a competitive edge over not only production businesses, but also those in the service sector. Service development is supported on fixed pillars such as knowledge, service genericness, their specificity and service trade liberalization (Gnusowski, Gonczaruk, Skąpska, Domakur, 2017). It is a basic requirement for the development of an organisation, not a luxury that only large,

technologically advanced firms can afford. Furthermore, constant changes in the market, the increasing needs of customers and ever shorter life cycles of innovation are leading to an intensification of activity with regard to innovation in businesses (Spath et al., 2013) through constant investment in improving their innovative capabilities (Sohlenius et al., 2006). For this reason, research on innovation aims to discover the factors which allow innovation to happen more quickly and effectively (Berry and Taggart, 2007). Implementing innovation into such a specific sector as investment planning requires a detailed and complex approach, both on a technical level and on a social level, aimed at the main participants of the investment process - the investor, designer and contractor. The role of each of these is significant and indispensable in this process, in order for the correct design objectives to be reached in an efficient timeframe, leading to a certain operation of a facility.

### **3. THE IMPERATIVE OF EFFECTIVENESS IN THE INVESTMENT PROCESS**

The main inspirer of making an investment is always the investor, whose developmental needs are met. In accordance with construction law (Dz. U. 1994 nr 89 poz. 414), an investor is a natural or legal person who begins the construction process necessary to realise the intended investment, allocates the required resources for this undertaking and ensures the completion of the designs and documents required by law in preparation for construction. They are the contractor or organiser, and in the final stage of the given process they carry out the operations required to allow for the use of the investment site. An equally important participant of the investment process is the designer. It is he who develops the construction project and the entirety of the project documentation, as well as checking and verifying this (article 20 of the construction law). In the construction phase, the designer supervises the work being carried out, ensuring its compliance with the construction project. The last of the main participants of the investment process is the contractor, who is responsible for carrying out all construction works contained in the investment plan. He is responsible to the investor for the correct and timely completion of the designed installations. The contractor is thus responsible for ensuring the necessary contracting potential and coordinating the work of subcontractors and suppliers. Fig. 1 presents an outline of the participation in realising the investment process of each participant together with their possibilities of implementing innovation. Currently the construction sector has to cope with the ever-increasing demands of the investment market. The implication of change and development is advancement, which brings about an improvement in current solutions, allowing for better collaboration of the human factor in preparing and realising ventures. It is indeed the collaboration and effective cooperation of all participants of the investment process that determine the search for new, innovative solutions in investment planning. The vast majority of large investments, of infrastructural importance, are currently implemented in Poland according to the innovative model including FIDIC procedures for implementation management (Matwiejczuk, Michna, Matwiejczuk, 2017). One of the new solutions in the organisation and management of the implementation of investments are IT systems based on grouping, processing and constant sharing of data about the investment process, which also facilitates the work of design teams. Currently these systems include Building Information Modeling, Integrated Project Delivery, Lean Construction.

*Figure following on the next page*



**Explanation of the figure:**

- ■ ■ - Limited participation of a participant in the investment process
- - great possibilities of innovation (Designer)
- - -→ - limited possibilities for innovation (Contractor)
- · · → - limited possibilities for innovation (Investor/User)

Figure 1: The contribution of each participant in different phases of the investment process  
 (Source: own work)

*Building Information Modeling (BIM)* is a design system based on the information modelling of a building, which allows constant access to information about the project, its budget, timeline and scope of investment. It can be defined as a collection of interactive principles, processes and technologies generating a methodology of managing information about the project throughout its entire life cycle, from the design phase to construction to its finalisation (Mancini et al., 2016). The BIM system makes the design process itself easier by providing the opportunity to test various variants and outlines in a virtual world, with the aim of choosing the optimal one. BIM can be used to make a range of important design decisions by the investor, designer or contractor, to formulate coherent construction documentation and - most importantly - to analyse the profitability and estimate the costs of investment (Tomala, 2016). *Integrated Project Delivery (IPD)* is a system for the organisation of close collaboration of all participants within the investment process. In this system, the knowledge and experience of the individual participants is used with the aim of optimising the project and eliminating losses, which makes the construction process profitable in each phase - design, preparation and delivery (Drzazga, 2006). *Lean construction* is a method of effective project design and management through relations, common knowledge and common goals (<https://www.leanconstruction.org>). Lean Construction increases the value of projects and eliminates the waste of resources such as time, bad decisions and unused human potential. This is the future of the investment process, where an emphasis is placed on positive relations between the human factor, while maintaining effectiveness, eliminating project wastage and stimulating new design solutions. In light of the presented problems, it seems important to find the answers to the following questions:

- RQ1: Which patterns stimulate innovative solutions in investment planning?
- RQ2: What are the most significant potential barriers to planning and implementing investment?

#### 4. THE SIGNIFICANCE OF HUMAN CAPITAL IN IMPLEMENTING INNOVATION

In innovation, more and more attention is being dedicated to human capital, commonly understood as knowledge, skills, abilities and attitudes, which come in the form of competent employees. It is claimed that human capital and innovation are closely linked by the incredible capabilities of the human mind and the hard to grasp hidden knowledge of employees, who are key in the process of creating innovation. (Wu et al., 2007; Marvel, Lumpkin, 2007; Alpkhan et al., 2010). In literature it is underlined that human capital determines the innovativeness of small and medium businesses (Lasch et al., 2007), and the employees of an organisation make up innovation "capital" and "assets" (Cabrito, 2014), which are particularly important for strategic technological ventures and become a significant factor of innovation ((Leiponen, 2005). In order for human capital to become a factor in propelling innovation, the necessary working conditions must be created, which will encourage the sharing of knowledge and the search for innovative solutions by employees. The innovative value of human capital arises through the use of correct HR practices, which contribute to the realisation of the firm's strategy based on innovation. Among the practices of managing human capital, the following are particularly important for innovation: managing results and the rewards linked with them, training, teamwork, the elasticity of tasks and communication (Michie, Sheehan, 2003), as well as the commitment of employees and their individual pro-innovation behaviours and leadership (Sheehan, Garavan, Carbery, 2014). The increase in significance of human capital in creating innovative solutions in businesses has led to the development of a new concept - employee-driven innovation (Kesting and Ulhri, 2010; Hryryp *et al.*, 2012). For over half a century, the creation of innovation was directed at specialists, scientists and experts in a given field, whose task it was to develop new knowledge and technologies. However, nowadays innovation is an imperative for societies and workplaces (Høyrup, p.4).

For this reason, the basis of this conception was the fact that most innovations are not created in a laboratory, nor are they created by a team of scientists, but rather are a result of the work of the average employee. Van Dijk, Den Hertog, Menkveld and Thurik (1997) underline that particularly in technological sectors, a suitably qualified group of engineers in a necessary condition for the implementation of innovative processes. In light of this, the development and management of the competencies of employees, who are traditionally seen as a set of knowledge, skills, abilities and other characteristics which are needed for successful problem solving, becomes significant (Campion et al., 2011, p. 226). One classification divides these into professional, methodic, social and personal competencies (Kauffeld, 2006; Meyer et al., 2013). Professional competencies are the skills and knowledge of employees connected with their profession, together with the ability to identify areas of improvement for the firm and find the relevant technical solutions (Kauffeld, 2006; Rauner et al., 2013; Heinen, 2011). Methodic competencies are connected with the cognitive skills of an employee and their ability to independently learn new ways of working and gaining expert knowledge (Erpenbeck, Michel, 2006). Social competencies include experience, knowledge and the ability to deal with various social interactions (Frey, Ruppert, 2013; Kauffeld, 2006). Meanwhile, personal competencies are on the one hand an ability to self-evaluate and create individual conditions for self-improvement, and on the other, values and one's attitude towards work (Frey, Ruppert, 2013; Kauffeld, 2006). Thus it becomes important to answer the following questions:

- RQ3: What is the effect of competencies of key employees on innovation in a business?
- RQ4: Which competencies of key employees are significant in implementing innovation into the investment planning process?



## 5. RESEARCH METHODOLOGY

The research was carried out in 2017 in the period July - September. In the research, a questionnaire was used. To collect data, the CAWI (*Computer Assisted Web Interviews*) technique was used in order to reach the largest possible group of respondents. The questionnaire was sent to 230 businesses, of which 59 completed questionnaires were returned. Therefore the response rate was 25.65%. A quantitative study was used because of the need to measure the researched phenomenon and to show a causal link. The results obtained in this way allow us to know the opinion of a given group of respondents on the research topic and to use them to form certain generalisations. The questionnaire was aimed at businesses in the construction sector, both those in housing construction, including developers, design or investment studios, and businesses of varying sizes including road, road and bridge, installation or construction-related businesses. In addition, the questionnaire was sent to important institutions realising investment projects. The questionnaire was made up of several parts, including factors stimulating new solutions in investment planning, barriers in planning and implementing innovation, and the significance of the competencies of individual participants of the investment process in the emergence of innovation. For the analysis of competencies, the division suggested by Meyer et al. (2013) was used, while the level of competitiveness of the business was defined on the basis of the respondents' own opinion on the components of competitiveness of their firms. The questions were closed with the option of adding one's own answer. The respondents' task was to choose one option from a 5-point scale. All of the respondents were either investors, designers or contractors in an investment process. The participation of individual respondents in the research was the following: investors made up 41% of the respondents, designers 28% and contractors 31%. A majority of researched businesses (69%) were small (or micro) businesses with regards to the number of employees, a significantly lower proportion (21%) were medium firms, and large firms made up 10% of the total. A clear majority of the businesses (42%) had over 10 years of experience in their sector, while 37% had been active for 5-10 years, and the remainder (21%) for less than 5 years.

## 6. DISCUSSION OF THE RESEARCH RESULTS

Correlations between implementing innovation into investment planning and the human factor participating in the investment process, stemming from the characteristics of the construction sector, create many areas of analysis. The research background was determining the factors facilitating an increase in the effectiveness of the operations of the main participants in the investment process in implementing innovative design solutions. When comparing the factors stimulating new solutions in investment planning (table 1), the largest effect according to business owners is caused by access to new technological solutions, while administrative and economic pressure on introducing innovation had the smallest effect. The average ratings in these groups were 4.42 points and 3.32 points respectively (on a 5 point scale). The results obtained in this area irrefutably point to the fact that an important stimulant of the effectiveness of the investment planning process are new technological solutions, access to them and the possibility of their implementation. This is particularly significant from the designer's point of view, who, having access to new technology and knowledge, will be able to suggest more effective solutions in each phase of the design process, which can be accepted by both the investor and potential contractor of the investment.

*Table following on the next page*

*Table1: Effect of individual factors stimulating new solutions in investment planning*

<i>Factors</i>	<i>Mean</i>	<i>Significance [in %]</i>
Administrative and economic pressure to implement innovation	3,32	16,6%
Access to modern building materials	4,12	21,4%
The creative human factor directed at solving difficult problems	4,19	22,6%
<b>The accessibility of new technological solutions</b>	<b>4,42</b>	<b>23%</b>
Limited financial resources	3,42	17,8%
Competition on the design market	3,96	20,6%

*Source: own work based on author's research.*

The determining of stimulants of introducing new solutions is inseparably linked to the determinants of the direct conditions aims of the design. On comparing these factors (table 2), it is clear that the main emphasis in design should be placed on *the functionality of solutions* and *safety of construction*. The average ratings in these groups were 4.81 points and 4.73 points. The results obtained prove the practical and consumer-based (investor/user) aspect of the design process. The main aim of the design process is indeed the potential use of the functionality of solutions and making things easier for the future user.

*Table2: Direct effect of individual factors on the design process*

<i>Factors</i>	<i>Mean</i>	<i>Significance [in %]</i>
<b>The functionality of solutions (the correctness of functional solutions, the standard of equipment, the flexibility of construction solutions, the optimal use of the physical properties of materials, adaptation to the environment, plasticity)</b>	<b>4,81</b>	<b>25%</b>
Technological correctness (the quality of design solutions taking into account given conditions of realisation and the technological and organisational level of the solutions)	4,50	23,4%
The safety of construction (durability, fireproofing, deformability, stability)	4,73	24,6%
The economics of solutions and design systems (the economic values of designed installations)	4,46	23,2%
The effectiveness of the investment as a whole	4,56	22,8%
Not exceeding the value of the investment as stated in the contract	4,23	22%

*Source: own work based on author's research.*

Among the barriers to implementing innovation in design is a lack of sufficient financial resources for the realisation of an investment and administrative barriers. Social (including human) and technical factors are barriers to a considerably lesser degree. A financial barrier constitutes not only the blocking of innovation in design or the realisation of an investment, but often constitutes a change in the material scope of an investment or a restriction in its functionality. This unfortunately brings about losses not only for the participants of the construction process, but also potential consumers and recipients of the investment. A further area of research was the significance of individual people participating in the investment process, the most important competences necessary for implementing innovation and their effect on the level of innovativeness of a business. The four main groups of competencies that were singled out for analysis were rated highly and similarly to one another: methodic competencies (labelled as M) - average 4.23; professional competencies (P) - average 4.22; social competencies (S) 4.21; personal competencies (PE) - 4.14. On this basis it is difficult to single out one group of competencies that is particularly significant in the innovation process. This indicates that success in innovative solutions should be viewed as a combination of individual competencies for a given position. For this reason, a comparative analysis of employee competencies that are key in the investment process by virtue of their function was carried out. Fig. 2 presents the most highly rated competencies for designers and contractors (average above 4.5) and investors (above 4.4). The significance of individual competencies

depending on the function held in the investment process is somewhat differentiated. Among the most significant competencies of the designer were responsibility (average 4.71), expert knowledge (4.57) and decision-making abilities (4.57) as well as the ability to work in a team (4.57). In the case of the contractor, significance was given to abilities such as the timely completion of work (4.78), decision-making abilities (4.67), responsibility (4.56), conflict resolution (4.56) and the ability to adapt (4.56). Meanwhile with regard to the investor, the competency requirements are lower in comparison with the aforementioned participants of implementing innovation, and the most significant of these were stated to be: expert knowledge, effectiveness, the ability to work in a team and group problem solving (each 4.42 points).

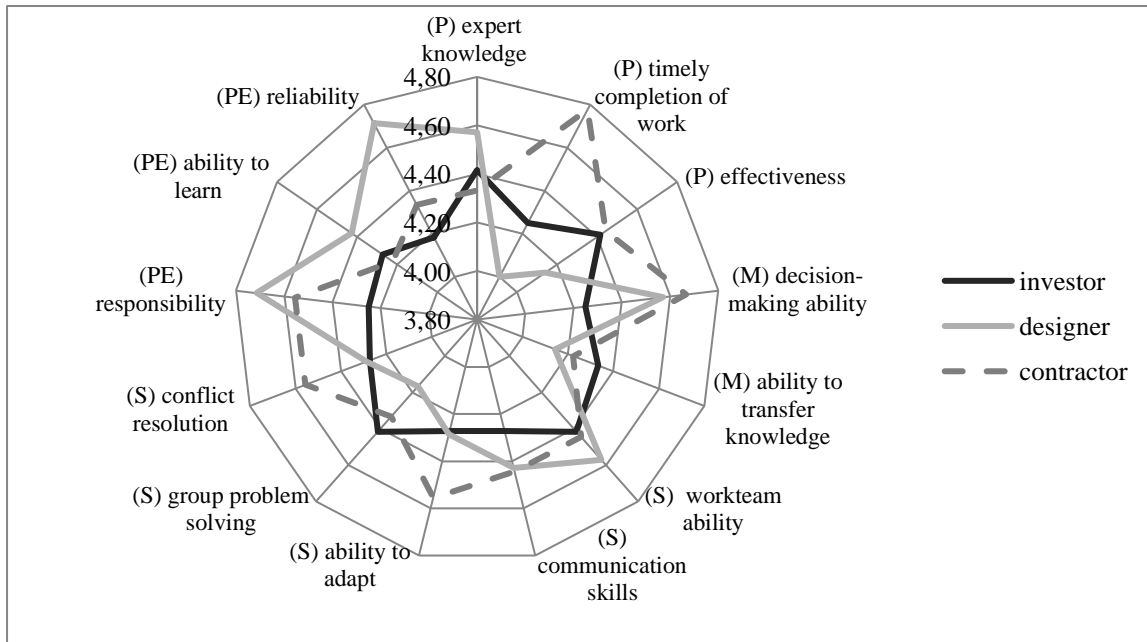


Figure 2: The significance of chosen competencies for the designer, investor and contractor (Source: Source: own work based on author's research).

When measuring the correlation between the level of competencies of individual participants and the level of innovativeness of a business, it should be noticed that the competencies of the designer, in particular their professional and personal competencies, and the contractor have a significant impact (table 3).

Table 3: Correlations between variables in the study (N = 59)

Item measures	professional competencies	methodical competencies	social competencies	personal competencies
level of competitiveness	<b>0,735839</b> (p)	0,452497 (p)	0,280241 (p)	<b>0,6200769</b> (p)
	<b>0,522058</b> (w)	<b>0,662803</b> (w)	<b>0,708480</b> (w)	<b>0,5330858</b> (w)
	0,143632 (i)	0,2089201 (i)	0,2805456 (i)	0,0877030 (i)

p < 0,05

Source: own work based on author's research.

High correlation coefficients (from 0.52 to 0.70) between the four competency groups of the contractor and the degree of competitiveness of a firm indicates a high significance of all competencies, however particular attention should be paid to social competencies. This is a confirmation of previously presented research results. However, the lack of a significant correlation between the competencies of the investor and the degree of competitiveness gives an indication of the lesser degree to which this participant of the investment process affects the implementation of innovation.

## 7. CONCLUSION

The results of the research presented in this article regarding the human factor in such a specific scope as implementing innovation in the investment planning process is multidimensional and multi-faceted. It indicates the fact that from the earliest stages of preparing an investment process, particularly when planning an investment, all actions should be directed towards achieving solutions with high usability, while maintaining optimal effectiveness. Access to technology and the knowledge of the designer regarding new solutions stimulates innovative solutions and their implementation. A basic barrier of designing and implementing innovation in the financial aspect. Without the effective securing and organisation of financial resources for the whole investment process, it is impossible to effectively design (designer), introduce and execute (contractor) the investment in the scope and timeframe planned by the investor.

The results of the research indicate concrete employee competencies which should be developed in construction firms, directed towards finding innovative solutions. Among the most significant competencies, regardless of the function held by the employee, are above all knowledge, the ability to work in a team and decision-making abilities. Meanwhile, the key participants in implementing innovation into the investment process are the designer and contractor. This research has an applied character in economic practice and can be used in the organisation of the investment process, particularly in the selection of personnel and in shaping the work of design teams.

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## WHAT IS REAL FACTOR INFLUENCING USERS' ACTIVITIES? PILOT STUDY BASED ON MEMETIC DECOMPOSITION OF PHOTOGRAPH'S CONTENT

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### **ABSTRACT**

*The main aim of the study is the creation and implementation of the methodology of memetic decomposition of photographs content. The proposed methodology is based on meme theory (Dawkins, 1976) in the context of Berlo's (1960) theory of the communication model and is focused on the decomposition of photograph contents into groups of single memes. The memes are present at different frequency. Some of them might influence the behaviour of social network users. Meme is defined as a single meaning, expressed in diversified form (text, graphic, sound, etc.). Each photo, shared in social networks is the conglomeration of memes. To extract memes from the content of photographs, the assumptions of the model of destination image formation according to Baloglu and McCleary (Baloglu, McCleary 1999) were used (i.e. groups of memes connected with: hotel; local cultural heritage and environment). Simultaneously, each photograph has two types of planes, i.e. manifest and latent. Both could be decomposed using the same tool. The analysis of the presence frequency of different memes on both planes in the context of user activities (i.e. 'likes', posting comments and sharing content) provides information about the memes or group of memes influencing user behaviours. Quantitative and qualitative social network content analysis are the main scientific methods of the study. Due to the initial character of the study only 206 photographs shared on Facebook fan pages of eight hotels were collected and analysed. The hotels were located in Warsaw. Based on the analysis of Spearman correlation coefficient and from the perspective of the manifest content of the analysed photographs it could be stated that the memes connected with the expression of hotel personnel positive feelings play the main role in the activation of users' behaviours. Excessive representation of memes connected with hotels interiors did not reveal positive connections with the on-line activities of recipients.*

**Keywords:** *communication, content decomposition, influence, memes, memetics, social network, users' activities analysis*

### **1. INTRODUCTION**

Social networks are an excellent platform for self-presentation, image creation and management. Goffman (1959), in the theory of self-presentation suggests, that individuals present themselves as they wish others to view them. Thus, they are building their identity on the network, which Reed et al. (2012) defined as "any category label to which a consumer self-associates either by choice or endowment". According to Hum et al. (2011) Facebook auto presentation is one of the types of identity management (IdM). This is the "process of creating, managing, and using identities, and the infrastructure that provides support for these processes. In IdM, each person or application is identified by a credential, which represents a set of attributes, issued by a reliable source. (Werner et al. 2017)". Of course, the phenomenon of self-presentation, through sharing specific content in the form of texts, photographs, graphics, and other multimedia in the social network, not only concerns individuals, but also economic entities, institutions, regions, etc. Leary and Kowalski (1995) identified three main themes of self-presentation. These were: economic or social gains, self-esteem, and identity maintenance.

Therefore, self-presentation is a process of transferring content in order to produce a particular effect. Hence, the theoretical framework of this study was a model of communication according to Berlo (1960), as well as meme theory as a carrier of cultural information (Dawkins, 1976). The main aim of the study was the creation and implementation of the decomposition of content methodology (mainly photographs) onto sets of single semantic attributes. It was assumed that these single attributes could be perceived as memes, replicating carriers of cultural information. Such an approach, in the light of Berlo's communication model (1960), focused on the effects of message transfer - allows the further analysis, focused on the influence of such defined attributes on behaviours of users which has been consuming shared photographs. The creation of base for analysis of influence of their content on different types of social media users is the secondary aim of the paper.

## 2. LITERATURE OVERVIEW

Marwick and Boyd (2011) defined social networks self-presentation as an activity focused on sharing digital content that exist within a larger social graph, which could be perceived as a networked audience (real and potential viewers: people, institutions, etc.). According to Goffmann (1959), an important element of self-presentation is the creation of an impression of the subject in the minds of the audience, connected with the perception of the source of the message. This is particularly evident in social networks. In the case of shared photos, Lo and McKercher (2015) point out, among others, that the subject of photos shared on social networks is a direct visualization of the way in which the user would like to be perceived by the recipients. At the same time, Fox and Vandemia (2016) as well as Valkenburg et al. (2017) point out that positive feedback from other users concerning the shared content contributes to strengthening and consolidating a positive self-image. This approach leads to the juxtaposition of the self-presentation mechanism (and, at the same time, the effect-oriented communication) with meme transfer theory. The term "meme" as a carrier of cultural information was proposed by Dawkins (Dawkins 1976). Memes are analogous to genes, which is the carrier of information through the process of succession. Most popular memes shape behaviours, attitudes, activities, lifestyles of an individual or groups of individuals. Memes are meanings, expressed in the form of pictures, words, sounds. A single meme may be considered a semantic attribute, referring to: a word, a sound, or an element present in the content of a photo, graphic. In this case, a melody, an image (graphics or a picture), or a piece of text, will constitute a set of memes. The characterization of memes in the context of their content, form and relativity in the sender-receiver layout is presented, among others, by Shifmann (2013), extracting the basic features of the meme, that is the source, form, and stance. As it mentioned above, the sender-message-receiver communication model (Schramm, 1954) and its development by Berlo (1960) in the model: source- message-channel-receiver-effect it is possible to observe complementary theories and the development of the phenomenon of self-presentation and communication in the context of the meme theory (Dawkins, 1976). By implementing this model, according to this theory, the following can be distinguished: 1. source of information (meme or set of memes), defined as the sender, 2. The information itself and the form of its transfer (meme / memes, their contents and their specific meaning - can be expressed in various forms: graphic, text, sound) and the receiver, present in the relationship between the sender, the content, and the receiver. According to Shifmann (2013), The whole relationship between the sender, the content, and the recipient is referred to as the stance. The source and the receiver are both encoders (emitting meaning) and decoders (in the reception process) of certain content i.e. they acquire, process, and transmit memes. Depending on external and internal conditions, the content that is sent and received can be interpreted and valued differently, and thus their "absorption" can have various effects (i.e. knowledge, skills, attitudes, cultural values, behaviours, etc.).

In this context, the key element is the "effect" of the content transfer, i.e. the expression of appearance of a mental and / or behavioural change as a result of the acquisition of the content (meme or meme set). This effect, in relation to the transfer of information (meme set) through the media, can also be seen from the perspective of affective, cognitive and behavioural activities of the users of social networks. – SN (Narula, 2006). For SN, the impact of the content on the recipient is defined by the COBRA model (Muntinga et al., 2011) or AIDAT (Charlesworth, 2012), in which their components include their behavioural activities: i.e. liking, posting comments and sharing content that can be valued, and as a result, get information on the spread potential of certain content (Stepaniuk, 2016). Assuming that the content of photographs can be regarded as the so-called subset of memetic pool (i.e. the total set of quantitative and qualitative attributes for describing the whole content of photograph), it is possible to distinguish more frequent and less frequent memes (attributes) within it. Such type of memes will influence different social networks users' activities more or less actively. Using the analysis of the correlation coefficient the dependence between memes frequency and different types of users' activities will be shown. The theoretical framework of the study was shown on the figure 1. :

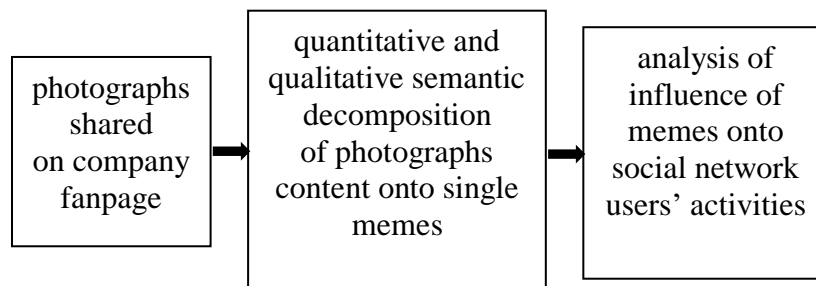


Figure 1. Theoretical background of the study (source: own elaboration)

### 3. MATERIALS AND METHODS

The presented elaborations show the potential influence of the photographs content onto users' activities. The photographs content could be divided onto manifest content (figure 2, A - main plan of the photograph) and latent plan (figure 2, B - located in the background of main plan). This is the modification of the approach presented by Kim and Stepchenkova (2015), who distinguished in photos the so called manifest content (main plan), elements presented within the main plan, and the latent plan (as a fleeting impression pertaining to the perceived consumption of the main plan of the image).

*Figure following on the next page*





Figure 2. Technical framework of the study. A – manifest plan; B – latent plan  
 (Source: Own elaboration, based on: [www.facebook.com/RadissonBluCentrumWarsaw](http://www.facebook.com/RadissonBluCentrumWarsaw),  
 [10.06.2017])

To extract the attributes of the memetic content of the photographs, the assumptions of the model of the destination image formation according to Baloglu and McCleary (1999) were used. The key element of such model are the perceptual-cognitive factors, which may become simultaneously the qualitative attributes of the memetic transmission. There are three main groups of factors influencing the formation of the perception of destination, i.e. experience, attractions, and environment. The meanings associated with the quality of the experience were grouped in the "Hotel" Category, while the ones referring to Attractions were grouped in the "Local cultural heritage" Category. Environmental attributes are covered by the 'Environment' category. The decomposition of each photograph consisted in indicating the main plan and the elements beyond it, and assigning them as many attributes indicated in Table 1 as possible.

Table 1. Research tool used in the work (source: own elaboration, based on Baloglu and McCleary (1999)).

Category	Attributes of the memetic content (main plan: mc_x_x; latent plan: lt_x_x)
Memetic attributes of Hotel	You will relax having a swim (mc_1_1) (lt_1_1)
	Our guests are smiling (mc_1_2), (lt_1_2)
	You will meet a cheerful stuff (mc_1_3) (lt_1_3)
	Our interiors are really great (mc_1_4), (lt_1_4)
	You will eat well (mc_1_5), (lt_1_5)
Memetic attributes of Local cultural heritage	In the neighbourhood you will see interesting architectural objects (mc_2_1), (lt_2_1)
	We have an interesting handcraft (mc_2_2), (lt_2_2)
	You will be intrigued by local tourist services and products (mc_2_3), (lt_2_3)
	You will be intrigued by the local traditions (mc_2_4), (lt_2_4)
	You can pray (mc_2_5), (lt_2_5)
	You will listen to good music (mc_2_6), (lt_2_6)
	Local people are great (mc_2_7), (lt_2_7)
Memetic attributes for Environment	Intriguing fauna (mc_3_1), (lt_3_1)
	Intriguing flora (mc_3_2), (lt_3_2)
	What a wonderful landscape (mc_3_3), (lt_3_3)

It has been assumed that each of the individual attributes is a meme, i.e. a medium for content that transmits meaning from the source to the recipient through the photograph. Memes, like genes, compete with each other for duration in the population. Hence the more expansive memes will appear more often and have a greater impact on the recipient than the less expansive ones. At the same time each shared photo comprises a set of memes that the source wants to convey to the recipients. Hence the conclusion that such a set will consist of memes perceived by the source as the most appropriate, i.e. capable of spreading quickly among the recipients. On the other hand, the reaction of the recipient can both focus on a set preferred by the source as well as on other memes, considered by the recipient to be more attractive. Of course, this is conditioned by a number of other factors, including age, level of education, gender, interests, etc. Based on the literature, it is predicted that:

H1: The perception of the content presented and the implication of the behaviour of the audience can also rely on completely different memes (attributes) from those that are most numerous in the content of an image.

At the same time, both the main plan and latent plan were analysed on the basis of the same set of qualitative attributes. Quantitative and qualitative social network content analysis were the main scientific methods of the study. 206 photographs shared on 8 Facebook Hotels' fan websites were collected and analysed. The hotels were located in Warsaw. The selection of cities was associated with the part of typology proposed by Christaller (Christaller 1933), who distinguished: capital city (more than 1 000 000 inhabitants), provincial cities (500 thousand - 750 thousand), regional centre (250 thousand - 500 thousand). Warsaw as a capital city was the best choice for the realization of pilot study due to the presence of high number of different hotel types (starting with five-star objects, and ending with 1-2-star ones). The selection of the analysed profiles was implemented with the use of the search engine integrated with Facebook. The combination of the keywords "Hotel" and "city name" was used. The first ten results were taken into account, of which, after preliminary analysis, eight profiles were selected for further study (Table 2).

*Table 2. Object of the study (Source: own elaboration)*

City name and the number of analysed profiles	Hotel's name and the number of analysed photographs	Total no. of analysed photographs
Warsaw (8)	Radisson Blu Centrum Hotel Warsaw (31); Marriot Warsaw (31); Gromada Centrum Warsaw (31); Da Silva Warszawa Piaseczno (31); Mercure Warszawa Centrum (31); Campanile (31); Hotel na Wiśle (20)	206

Nonparametric correlation tests (Spermann's) were used to analyse the relationship between meme groups and customer behaviour. This is one of the statistics used in social networking exploratory data analysis (Xiao et al. 2016). All photographs published on the analysed profiles between January 2016 and January 2017 were taken into account.

The STATISTICA 12 suite was used for the performance of statistical analysis.

#### 4. RESULTS

The analysed 206 photographs generated 2617 behavioural activities of the recipients. These were: likes ( $n_{li}$ ), shares ( $n_{sh}$ ) and comments ( $n_{co}$ ). Basic statistics of connected with behavioural activities of content recipients are shown in the Table 3.

Table 3. Basic statistics connected with behavioral activities of content recipients  
 (source: own elaboration)

	$n_{li}$ (n=2464)	$n_{co}$ (n=74)	$n_{sh}$ (n=79)
$\bar{X}$	11,96	0,356	0,38
$SD$	33,52	0,99	2,27
$min$	0	0	0
$max$	358	5	22

Where:  $n_{ph}$  – no. of analysed photographs;  $n_{li}$  – no. of likes;  $n_{co}$  – no. of comments;  
 $n_{sh}$  – no. of shares

Quantitative and qualitative analysis of the separated memetic components of the main plan (mc) shows that the content is dominated by variables related to the quality of the interior and gastronomy (mc\_1\_3, mc\_1\_4, mc\_1\_5). The least represented are the memes related to the environment of the object (Figure 3).

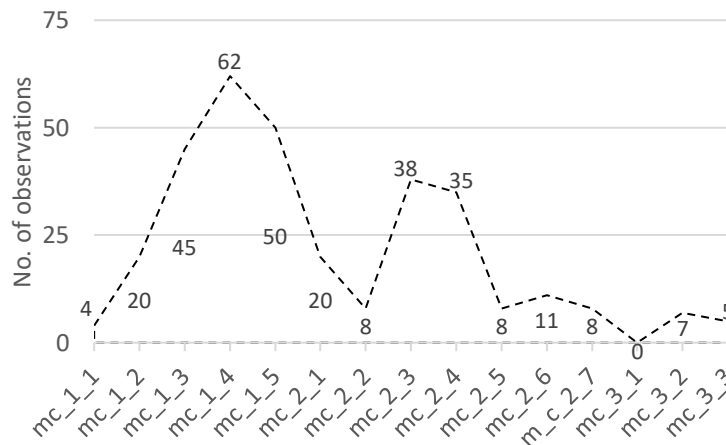


Figure 3. Frequency of occurrence of memetic attributes in the main plan of analysed photographs  
 (source: own elaboration)

However, the memes related to the transfer of content related to friendly and pleasant service (mc\_1\_3) are, according to the results in Table 2, a key element for generating user activity, while the memes related to interior design (mc\_1\_4) have a negative impact on the number of likes and dislikes. Memes related to the local cultural heritage (mc\_2\_4) are not significantly correlated with behavioural activities of users, despite the frequent display of these elements. The presence of a negative correlation between the presentation of the residents' representatives and the number of likes of a given post was observed. All relations mentioned in the tables 4 and 5 are statistically significant, i.e. such variables influencing the behavioural activities of social networks users.

Table following on the next page

Table 4. The influence of the memes existing as main components of the photograph onto recipients activities based on Spearman correlation coefficient analysis ( $p < 0,05$ )  
 (source: own elaboration with using STATISTICA 12)

	mc_1_1	mc_1_2	mc_1_3	mc_1_4	mc_1_5	mc_2_1	mc_2_2	mc_2_3	mc_2_4	mc_2_6	mc_2_7	mc_3_1	mc_3_2	mc_3_3	mc_1_1
n_li			(m)	- (w)	(i)							- (i)			
n_co			(w)												
n_sh			(w)	- (i)											

Where:  $n_{li}$  – no. of likes,  $n_{co}$  – no. of comments;  $n_{sh}$  – no. of shares; (m) – moderate relation; (w) – weak relation; (i) – irrelevance relation, but statistically significant  
 Variables:  $mc_{1_1}$  - You will relax having a swim;  $mc_{1_2}$  - Our guests are smiling;  $mc_{1_3}$  - You will meet a cheerful stuff;  $mc_{1_4}$  - Our interiors are really great;  $mc_{1_5}$  - You will eat well;  $mc_{2_1}$  - in the neighbourhood you will see interesting architectural objects;  $mc_{2_2}$  - We have an interesting handcraft;  $mc_{2_3}$  - You will be intrigued by local tourist services and products;  $mc_{2_4}$  - You will be intrigued by the local traditions;  $mc_{2_6}$  - You will listen to good music;  $mc_{2_7}$  – local people are great;  $mc_{3_1}$  – intriguing fauna;  $mc_{3_2}$  – intriguing flora;  $mc_{3_3}$  – what a wonderful landscape

For the memetic content of images, concerning the area lying outside the main plan, a similar relationship was observed, i.e. exposing mainly the memes concerning the quality of the interior ( $lt_{1_4}$ ). In the case of the second group of memetic content (Local cultural heritage), it is the least numerous and most often manifests by being exposed in the background of architectural objects ( $lt_{2_1}$ ). The third group of memes (Environment) is best represented by the content of the flora ( $lt_{3_2}$ ). In turn, the content presented for Warsaw hotels mostly relates to landscapes ( $lt_{3_3}$ ). Details are shown on figure 4.

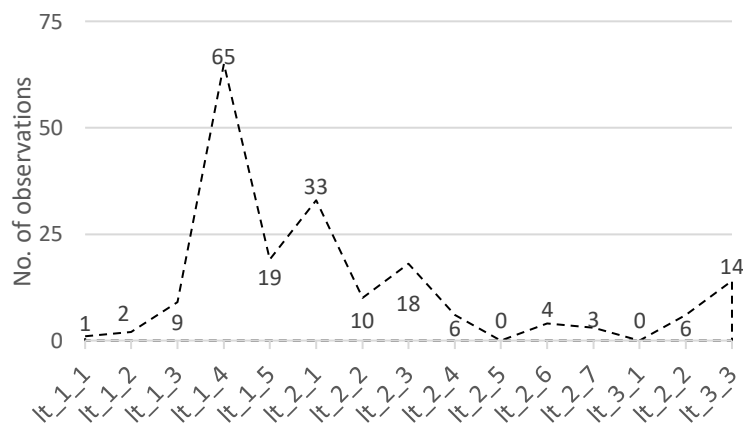


Figure 4. Frequency of occurrence of memetic attributes in the latent plan of analysed photographs (source: own elaboration)

The memes, whose presence is most frequently correlated with the behavioural activities of users is the content relating to the design of an object and the quality of service (variables  $mc_{1_3}$ ,  $mc_{1_4}$ ,  $mc_{1_5}$ ). In the analysed case, the presence of content directly related to the interior of hotel facilities negatively affects the number of likes and dislikes. For memes that occur within latent plan ( $lt_{1_4}$ ), this relationship is reversed, i.e. the exposed attributes of interiors stimulate the response of the users through likes and dislikes. The memes from groups related to the cultural attractiveness of places (local tourist services and products) are positively

correlated with the number of comments and shares. From the perspective of the meanings related to nature, action (liking) is stimulated by the content related to landscapes (*lt\_3\_3* subset). Details are shown on Table 5.

*Table 5. The influence of memes present as latent components of the photograph onto recipients activities based on Spearman correlation coefficient analysis ( $p < 0,05$ )*  
 (source: own elaboration with using STATISTICA 12)

	lt_1_1	lt_1_2	lt_1_3	lt_1_4	lt_1_5	lt_2_1	lt_2_2	lt_2_3	lt_2_4	lt_2_5	lt_2_6	lt_2_7	lt_3_1	lt_3_2	lt_3_3
n_li				(i)					-(w)						(i)
n_co				(i)				(i)							
n_sh								(w)							

Where: *n\_li* – no. of likes, *n\_co* – no. of comments; *n\_sh* – no. of shares; (*m*) – moderate relation; (*w*) – weak relation; (*i*) – relation irrelevance, but statistically significant  
 Variables: *lt\_1\_1* - You will relax having a swim; *lt\_1\_2* - Our guests are smiling; *lt\_1\_3* - You will meet a cheerful staff; *lt\_1\_4* - Our interiors are really great; *lt\_1\_5* - You will eat well; *lt\_2\_1* - in the neighbourhood you will see interesting architectural objects; *lt\_2\_2* - We have an interesting handcraft; *lt\_2\_3* - You will be intrigued by local tourist services and products; *lt\_2\_4* - You will be intrigued by the local traditions; *lt\_2\_6* - You will listen to good music; *lt\_2\_7* – local people are great; *lt\_3\_1* – intriguing fauna; *lt\_3\_2* – intriguing flora; *lt\_3\_3* – what a wonderful landscape

## 5. CONCLUSION

Each of the analysed photographs is a conglomerate of specific meanings. From the perspective of the theory presented by Dawkins (1976), these meanings can be seen as memes. The obtained results allow to state that such defined memes are most likely to be assimilated and influence the emergence of mental changes in the minds of the recipients. These changes may imply specific user behaviour within a social network. Obviously, the form of behaviour can be determined not only by the message itself, but also by the manner of its reception, which in turn depends on many socio-economic variables describing the recipient. Their inclusion in the course of further detailed studies will undoubtedly make a significant contribution to the understanding of the memetic process of forming the way of perception of phenomena and the behaviours related to it. It has been observed that emitting a large number of memes closely related to the profile (here: the interior of a hotel) in the main plan of a photograph probably does not contribute to activating content recipients to likes, comments, and sharing. The stimulants of these effects (i.e. behavioural activities) were, in turn, the memes related to cheerful staff and the gastronomic offer of the presented establishments. However, what "did not function" within the main plan (i.e. memes related to the interior design of the hotel did not activate users to act), in the secondary plan significantly correlates with the behaviour of the audience. Hence the conclusion that the secondary content is the perfect place to locate complementary content concerning the hotel, i.e. related to the cultural heritage of the area and its natural environment. It can also be stated that the sequence of exposing memes of various types in the main or latent plan is relevant from the perspective of the effect, i.e. cognitive and behavioural activities of the users. Similarly, the incidence of specific memes in the main plan and latent plan may be relevant in the process of inducing online activity of the members of a social network. Bearing this in mind, the hypothesis made for the purposes of the study should be accepted. This type of research is complementary to the approach represented by the so-called behaviour genetics. From such "perspective, sophisticated human beliefs, attitudes, and behaviours are the by-products of a rich interplay between genes underpinning human

neurological function and exposure to the social environment, between our biological nature and the nurture we receive from the world around us, not one influence exclusive of the other” (York, 2017). The difference, however, is that the function of genes is being taken over memes - carriers of cultural information.

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## PROSUMER RELATIONSHIP MANAGEMENT IN OPEN INNOVATION PROCESSES ON CROWDSOURCING PLATFORMS

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### **ABSTRACT**

*Development of crowdsourcing platforms on the Internet is driven by new technology, creativity of a crowd, and the move towards open innovation processes. Crowdsourcing platforms (CPs) engage active members of the crowd as prosumers (producers, developers and actual or potential consumers) that have both the willingness, competencies and abilities in solving problems and creating innovations also new products for innovative companies. The purpose of the paper is to propose the model of open innovation process execution on CPs and present an idea of prosumer relationship management (PRM) in activities of this process. This paper determines assumptions of using open innovation processes by innovative companies on CPs on the Internet. Users of these platforms, that is: prosumers, the innovative company(-ies) looking for innovative solutions and/or the manager(s) of the platforms provide relevant services in the proposed model of execution of open innovation process activities. Prosumers with other users co-create resources and value of CPs. The paper describes the role of prosumers, services provided by them, and an idea of using PRM in open innovation process development on CPs. Services of organizing communication and collaboration with prosumers and motivating them enable CPs to manage prosumer relationships and are presented for activities of open innovation processes. Examples of using PRM are characterized on the example of existing CPs on the Internet.*

**Keywords:** *crowdsourcing platform (CP), Internet, open innovation, process, prosumer relationship management (PRM)*

### **1. INTRODUCTION**

Contemporary companies extend or dissolve own borders to utilize external sources of knowledge or innovative solutions efficiently and cooperate with outside partners, also consumers within the framework of external networks, also on the Internet, to improve execution of open innovation processes. These changes influence on evolution of innovation processes from linear and closes to networked and open. The Internet characterizes high degree of openness, new ways of communication among its users and richness of created by them actual information, new ideas, that stimulate development of new values, innovative solutions, also new products by engaged members of Internet's communities (a crowd) in open innovation processes. Crowdsourcing is a form of IT-enabled open innovation and it is applied by innovative companies to learn new values, knowledge, innovations, also new products from the crowd. The new possibilities of innovation co-creation on crowdsourcing platforms (CPs) on the Internet enable customers to engage in accomplishment of open innovation process activities. The active role of the crowd on CPs is accompanied by the rapidly evolving global trend of social communities (networks) development on the Internet. From the innovative company perspective, the value of the use of these external networks depends on the number of their users that are or may be involved as prosumers in execution of open innovation process activities by the manager(s) of CPs. Actual or potential consumers that are creative and actively participate in execution of open innovation process activities, also new product development, and/or production, and/or commercialization are called prosumers. The goal for any CP is to engage a crowd that has both the willingness and capacity in new value, innovation creation. Today, users of CPs not only contribute ideas and input to product development, but they also



share goods, services, space, and money to deliver solutions that traditionally have been performed by the companies themselves (Kohler, 2015, pp. 63-64). The purpose of the paper is to propose the model of open innovation process execution on CPs and present an idea of prosumer relationship management (PRM) in activities of this process. This paper characterizes assumptions of using crowdsourcing by innovative companies and execution of open innovation processes on CPs. It describes the role of prosumers, and also influence of their motivation on creation of ideas, innovative solutions on the Internet. Different kinds of users of CPs, that is: prosumers, the innovative company(-ies) looking for innovative solutions, and/or the manager(s) of the platform provide relevant services in activities of open innovation processes. The paper describes an idea of PRM and influence of PRM on improvement of open innovation process accomplishment on CPs. The proposed model of open innovation process presents services which are provided by prosumers and other users of CPs during PRM in open innovation process activities. The concept of PRM connect motivating prosumers with organizing communication and collaboration with them by the manager(s) and/or the innovative company(-ies) in open innovation process activities on CPs. Examples of using PRM in the economic practice are presented for chosen CPs.

## **2. OPEN INNOVATION PROCESSES ON CROWDSOURCING PLATFORMS**

Open innovation is an emerging innovation management model comprised of two dimensions: inbound and outbound open innovation. Inbound open innovation is an outside-in process and involves opening up the innovation process to knowledge exploration. Here, external knowledge exploration refers to the acquisition of knowledge from external sources. Outbound open innovation is an inside-out process and include opening up the innovation process to external exploitation, commercialization of knowledge, innovative solutions (Lichtenthaler, 2011, p. 76). Innovative companies as open innovators develop a systematic strategy for motivating the creation, application, and commercialization of external knowledge or innovative solutions, also new ideas or products for own benefits, which are results of cooperation with partners of outside innovation networks, that is: high schools, R&D entities, laboratories, competitors, engaged and creative consumers (prosumers), also in open innovation platforms on the Internet. In contrast, in the closed innovation model, internal R&D activities enable the company to elaborate and produce own new products, and bring them to innovation markets by the company itself. (Dolińska, 2015, p. 325; Dolińska, 2017a, p.75). Open innovation platforms can be a means for companies to accelerate the open innovation processes. In such platforms, stakeholders contribute to and collaborate on ideas, propose new concepts and trends, present solutions to win contests and to answer companies' needs (Battistella, Nonino, 2012, p. 558). Open innovation processes rely on the development of complementary networks. In a network approach, an innovation is considered as a solution to the problem experienced by its users. This process involve several actors who combine and adapt their resources to commonly develop the innovation (Goglio-Primard, Crespín-Mazet, 2015, pp. 136-137). Contemporary companies are recognizing the potential of using the communities (external networks) of partners, also customers as a source of valuable information, knowledge in open innovation processes. Open and networked innovation idea is a result of collective knowledge management and interorganizational learning of companies and their collaborators within the framework of outside networks (also on the Internet) during accomplishment of open innovation process activities, commercialization and/or diffusion of innovations in markets (Dolińska 2015; Dolińska 2017b). The emergence of the Internet has created new opportunities to capitalize on consumer' creativity and knowledge during new innovation development and virtual consumer integration has been recognized as a promising open innovation practice (Füller, Matzler, Hutter, Hautz, 2012, p. 247). Open innovation platforms are designed for contribution and collaboration of one or two kinds of members: individuals and companies in

open innovation processes (Battistella, Nonino, 2012, p. 558) and can be a means for companies to accelerate these processes, application and commercialization of innovations. Open innovation platforms integrate knowledge of their participants to create new solutions with competitive advantage potential for people and companies. The following types of open innovation platforms are developed on the Internet: crowdsourcing, peer production and open source software platforms. The process of crowdsourcing is sponsored by an organization that directly manages the crowd. Common-based peer production refers to a new model of socio-economic production where a large number of people is coordinated into large projects without traditional hierarchical structure of organization. Open source software is software that is developed collaboratively by different and independent geographically distant programme developers (Benkler, 2016; Dolińska, 2017 a; Dolińska, 2017b). Crowdsourcing-based open innovation model consists of three elements. First, companies cooperate with the crowd using open innovation model. Second, opening up certain processes and resources to external creators can make a significantly greater set of resources available to the company and allows it to share social networks, peer-to-peer technologies, user-generated content, and mobile connectivity to invite users to participate in innovation creation activities. The third, crowd members of the platform co-create value with its provider or by cooperating with other groups of its users. As the platform leader the company facilitates interactions and exchanges along the entire process of value, innovation creation (Kohler, 2015, p. 64). CPs enable companies to find innovative solutions, new products in accordance with systematically and continuously changing user needs and expectations. They are examples of existing virtual innovation networks in the economic practice.

### **3. SERVICES PROVIDED BY PROSUMERS IN OPEN INNOVATION PROCESS ACTIVITIES ON CROWDSOURCING PLATFORMS**

Prosumers are engaged in innovative development of companies and they can co-create values, innovative solutions which are applied in companies, and differentiate their offer from competition influencing on its worth in the market (Izvercian, Seran, Buciuman, 2013, p. 388). Prosumers strive towards being involved in the value creation process more than just being consumers: for instance, they want to contribute as developers or producers. Prosumers provide information about their preferences with respect to the customization or personalization of goods; this information serves as the basis for the production of the final good. As a result, prosumers can be regarded as active participants in innovation, also new product development processes because, due to their interaction with online content and their contribution to content generation, companies consider them as partners in development of their innovative solutions, products (Mladenow, Bauer, Strauss, 2014, p. 78). Customers as engaged users of crowdsourcing can be involved in all activities of open innovation process, beginning with the acquisition of weak signals, future needs in innovation markets, and continuing up to sharing user experiences, abilities and further developing ideas and concepts when using the final products and services (Battistella, Nonino, 2012, p. 559), and how promote, sale of them efficiently. The role of active, engaged consumers becomes central in development of innovations on CPs, from foresight, an idea generation, through innovative solution elaboration, development, testing, often commercialization and diffusion. From the innovative company(-ies) perspective, the value of using Internet's communities as innovation networks on CPs depends largely on the number and a set of their active, creative prosumers involved in development of open innovations. For benefits of cooperation with prosumers as engaged members of these communities by CPs belong:

- the rapid online communication with them,
- the broad dispersion and large independency of them,
- change of their composition at the time,

- synergic effects of using their collective abilities, creativity, competencies.

Each kind of users on CPs may provide relevant services in open innovation processes:

- The engaged crowd members as prosumers of the Internet's community participate in creation of value, knowledge, innovations for company(-ies) looking for innovative solutions on the platform. They collaborate and interact with users of the platform (other members of the crowd, the manager of the platform or the innovative company(-ies) during execution of relevant activities in open innovation processes. Prosumers participate in determining new needs, expectations of customers, creation of new values, design ideas, innovative solutions, products, services, evaluating them, or applying and testing them, and/or in promotion, sale of them in an active way, also online.
- The platform manager (that is: the innovative company as the owner of the platform, or the broker-, or an independent firm) facilitates interactions, collaboration, knowledge exchange and development, also direct communication with members of the crowd during execution of open innovation processes. The independent manager of the platform provides individualized crowdsourcing services for innovative company-clients looking for innovative solutions on CP. It presents problems for solving, innovations for elaboration, also organizes integrating and using knowledge, innovative abilities, competences of prosumers on CP. It propose (with the innovative company-clients) different types of motivations for prosumers. The manager of the platform provides also services which enable the crowd to use a comprehensive tool collecting new values, using knowledge, submitting new solutions, design ideas and/or putting all the diverse concepts together.
- The innovative company looking for innovative solutions on the platform, presents own problems for solving or innovations, also new products for elaboration, development by prosumers. The company opens up innovation processes, knowledge resources to external creators (prosumers) on CP.

Different levels of concreteness during description and analysis of open innovation process activities may be analyzed. Open innovation process on CPs can consists of many activities and each platform may serve one or more, or all of these activities (Dolińska, 2017 b, p. 112). Members of the crowd may participate and/or collaborate with manager of the platform and/or innovative company(-ies) in execution of the following (one, a few, all) activities of open innovation process: 1) presentation of expectations, 2) generation of new ideas, 3) evaluating design ideas, 4) innovation elaboration, testing, 5) innovation application, development, 6) innovation promotion, sale, diffusion. Prosumers as engaged members of the crowd provide own services in open innovation process activities in accordance with expectations and/or orders of CPs (see table 1). The contribution of individual consumers to the development of open innovations, also new products varies strongly. Therefore, the identification and selection of the right consumers play a critical role (Füller, Matzler, Hutter, Hautz, 2012, p. 247) for CP existence. Managing prosumer relationships that is organizing communication, collaboration and matching motivation system with prosumers as the most active and creative members of the crowd, influence on efficiency of their work during execution of open innovation processes on CPs.

*Table following on the next page*

*Table 1: Services of prosumers in open innovation processes activities on crowdsourcing platforms (own elaboration)*

Activities of open innovation processes	Services provided by prosumers in activities of open innovation processes on CPs
Foresight	<ul style="list-style-type: none"> <li>• engaging in anticipating evolution of markets</li> <li>• presenting new values, needs, expectations of customers</li> </ul>
Generation of new ideas	<ul style="list-style-type: none"> <li>• using own creativity, experiences, knowledge; proposing new concepts</li> <li>• generating new design ideas also for new products, services, submitting them online</li> </ul>
Evaluating design ideas	<ul style="list-style-type: none"> <li>• evaluating the design ideas, concepts, also voting on them, giving opinions on proposed concepts</li> </ul>
Innovation elaboration, testing	<ul style="list-style-type: none"> <li>• active creating (co-creating), developing innovations</li> <li>• testing and evaluating innovative solutions and connected with them requirements</li> </ul>
Application and development of innovation	<ul style="list-style-type: none"> <li>• discussion of prosumers provide a market test of the innovative solution (also new product, service), which is the best candidate for implementation</li> </ul>
Innovation promotion, sale, diffusion	<ul style="list-style-type: none"> <li>• taking part in promotion of innovative solutions (also products and/or services) via own community, users' social media channels</li> <li>• participating with the company in sale of innovations via online and/or physical channels, diffusion of them</li> </ul>

#### **4. PROSUMER RELATIONSHIP MANAGEMENT IN OPEN INNOVATION PROCESSES ON CROWDSOURCING PLATFORMS**

Companies identifying how to harness the power of crowds is the critical step for companies to differentiate themselves in the marketplace and sustain their competitive edge (Malhotra, Majchrzak, 2014, p. 122). Turning engaged users of the crowd into creators, developers, co-producers, co-sellers on crowdsourcing platforms gives companies insights into what actual or potential consumers really want, look for or even dream of. It enable companies to prepare valuable offers for consumers in accordance with proposed by prosumers new values, ideas, elaborated by them innovations also new products, and next to engage prosumers in promotion, selling of new products. This change of the role and importance of consumers in innovative development of companies and cocreating open innovations by prosumers on the Internet influence on evolution from a company-centric to a prosumer-centric open innovation process. Hence, the key for efficient using Internet's communities by companies is PRM that is organizing communication and collaboration with the crowd, and also motivating members of the crowd for creative participation in execution of innovation process activities on CPs. By leveraging users' resources, CPs are able to get complementary skills and assets as well as broaden their talent pool. By getting the crowd to create value for the company for free or for a small fee, the company's cost structure can be substantially better than those of their competitors (Kohler, 2015, p. 66). Then companies try to motivate prosumers and learn innovative solutions from them effectively. For a consumer to become prosumer he or she needs a motivation to act, to exceed his or her traditional role and start creating a new output. The motivation is the key for presuming and it can be used by the company for determining collaboration and co-creation of value (Izvercian, Seran, Buciuman, 2013, p. 388). As with any open and social community, the motivation to participate is the key factor. The success or failure of a collective innovation lies with the community manager's ability to motivate such participation inside CPs It is therefore fundamental to understand how to stimulate members of the crowd and companies' participation and knowledge sharing throughout the innovation process (Battistella, Nonino, 2012, p. 559). On the one hand, there are crowdsourcing projects where active participants act rationally and only contribute if they are compensated correspondingly. Then prosumers may get financial prizes which include cash bonuses, small monetary rewards, price reductions and/or have access to valuable information. On the other

hand, there are many crowdsourcing projects without these incentives. In these cases, volunteers are typically motivated by the desire to experience something new, to collaborate, share knowledge with others, or to accomplish important for people goals. Sometimes they want to receive social recognition, for instance, take part in sensible and creative work, the fun associated with collaboration with other participants and execution of tasks in projects (Mladenow, Bauer, Strauss, 2014, p. 80). Only when consumers are qualified and motivated to contribute promising ideas and relevant know-how they are able to add value to open innovation (Füller, Matzler, Hutter, Hautz, 2012, p. 247). Being motivated means being compelled or encouraged to act. The distinction between different types of motivations is based on an analysis of attitudes, intentions and goals that lead people to act and behave in a certain way. The framework of motivations may be subdivides in intrinsic and extrinsic ones (Battistella, Nonino, 2012, p. 559). Crowdsourcing platforms motivate prosumers using (see table 2) (Battistella, Nonino, 2012, p. 559; Dolińska, 2017a, p. 78; Mladenow, Bauer, Strauss, 2014, p. 80):

*Table 2: Classification of prosumer motivations on crowdsourcing platforms (Battistella, Nonino, 2012, p. 559; Dolińska, 2017a, p. 78; Mladenow, Bauer, Strauss, 2014, p. 80)*

Forms of motivation	Subdividing of motivations	Examples of the relevant prosumer motivations
extrinsic motivation	economic motivations	financial rewards for the best solutions, also in the form of a revenue share on the sales of new products, free final products, services, cash bonuses, price reductions
	individual motivations	growth of professional status, new opportunities, career benefits, personal learning, share knowledge with others, higher reputation by appearing in the list of problem solvers, innovators, winning becomes a demonstration of efficacy of own work and own ideas, also creating personal profiles on platforms, receiving free newsletters, access to valuable information, knowledge
	social motivations	establishing relationships with other professionals of the crowd, exchange information, knowledge with them, sharing with them and building social capital, mutual collaboration and execution of tasks in team projects
intrinsic motivations (concern not financial advantages)	individual motivations	opportunity to express individual creativity, attachment to the community, entrepreneurial mindset, sense of membership, enjoyment, fun, entertainment, altruism, using own resources to do something good, beneficial for people
	social motivations	social identity and responsibility in project, interorganizational teams, benefits of collective, interorganizational learning, sensible and creative work during collaboration in open innovations, using mutual motivations

- extrinsic motivations which consist of:
  - economic motivations – propositions for prosumers that lead directly or indirectly to financial advantages for them,
  - individual motivations - connect professional advantages for prosumers and opportunity to express their individual engagement, creativity, abilities,
  - social motivations - include obligations and responsibilities that arise from the social sphere of the crowd members and influence on the crowd development and benefits of interorganizational learning,
- intrinsic motivations (concern not financial advantages), that is:
  - individual - consider the psychological-emotional sphere of prosumers and propose them active personal learning and knowledge exchange during solving problems, generating new values, ideas, innovative solutions,
  - social, which refer to social influence and social identity, sense of cooperation and social search by prosumers as members of the Internet's community.

The independent CP managers must understand how to motivate the crowd and stimulate prosumers' and innovative companies' mutual collaboration, knowledge development and effective using in open innovation processes. Innovative companies as managers of own CPs organize communication and cooperation with the crowd and motivate prosumers during accomplishment of open innovation process activities. PRM connects services of motivating prosumers, organizing communication and collaboration with them in open innovation process activities. These services are provided by the manager(s) of CPS and/or innovative company looking for innovative solutions on the platforms. Characteristics of PRM during execution of open innovation process activities on CPs presents table 3.

*Table 3: Prosumer relationship management in open innovation process activities on crowdsourcing platforms (own elaboration)*

Activities of open innovation process	Prosumer relationship management (motivating prosumers, organizing communication, and collaboration with them) in open innovation process activities on crowdsourcing platforms
Foresight	<ul style="list-style-type: none"> <li>• presenting problems for solving, innovations for designing and/or development</li> <li>• analyzing conversations, interactions, relationships among prosumers</li> <li>• using text-mining and co-word analysis to extract customer needs and market trends</li> <li>• using links to other sites and external social networks for sharing and discussing of challenges, ideas and new technologies</li> </ul>
Generation of new ideas	<ul style="list-style-type: none"> <li>• including the crowd in value, new concept creation, collecting and actualizing new ideas</li> <li>• organizing contests for the best problem solving, new values, design ideas, concepts, innovative solution (also new products) generation</li> <li>• applying relevant and different forms of the crowd motivations</li> <li>• connecting knowledge, experience, competences of prosumers and/or specialists from the innovative company</li> </ul>
Evaluating design ideas	<ul style="list-style-type: none"> <li>• results of voting (a high number of votes) is considered as an indication of high buyer interest</li> <li>• taking advantage of the wisdom, opinions of the crowd and the innovative company</li> <li>• analysis of financial and marketing aspects of new innovative solution application enable the manager to choose accurate, profitable solutions quickly</li> </ul>
Innovation elaboration, testing	<ul style="list-style-type: none"> <li>• motivating prosumers for creating (co-creating), development of innovations</li> <li>• using the relevant software for testing innovative solutions in collaboration with the crowd</li> <li>• listening to advices of prosumers on outside firm-partners and collaborating with chosen partners during implementation of innovations by the innovative company</li> </ul>
Application and development of innovation	<ul style="list-style-type: none"> <li>• organizing participation of the crowd in application and/or development of the chosen best innovative solutions</li> <li>• proposing prosumers financial or other prizes only for the most profitable and/or cost effective solutions</li> </ul>
Innovation promotion, sale, diffusion	<ul style="list-style-type: none"> <li>• connection of innovation (also new product, service) design by prosumers with their participation in innovation e-marketing</li> <li>• involving prosumers in promotion, introduction in the market, diffusion of innovations</li> <li>• motivating prosumers for profitable selling of innovations, proposing them shares in sale worth or profit</li> </ul>

Management of prosumer relationships by companies looking for innovative solutions and/or the manager(s) of CPs influence on effects of prosumer work, operation of platforms and mutual collaboration of their users during accomplishment of open innovation process activities.

## **5. PROSUMER RELATIONSHIP MANAGEMENT ON CROWDSOURCING PLATFORMS IN THE ECONOMIC PRACTICE**

Examples of PRM on CPs are presented for the following platforms: Mulino Bianco, IdeaConnections, InnoCentive and LEGO Cuusoo. The Mulino Bianco company produces a wide variety of bakery products. The crowdsourcing strategy of this firm is based on virtual PRM that is its communication and collaboration with the Internet's community via the application of innovative marketing techniques. CP of Mulino Bianco is open to prosumers and enables them to propose new product ideas, and vote for the most original one. The aim of prosumers is to propose, assess, collect, analyze the ideas, and actualize them if they are consistent with the company's mission, vision and values. The firm takes into consideration any proposal of new product which is not related with its current offer. The platform is divided into areas connected with accomplishment of open innovative product process activities. These areas connect presentation of expectations and beginning the project with generating new product ideas, next screening and commenting them. All ideas proposed by the members of the firm community are evaluated, commented and receive a public response of viability or not. The ten most voted ideas are collected in a dedicated area and submitted by careful analysis for feasibility. If the outcome is positive, the Mulino Bianco company begins to introduce the new product in the market. Prosumers may read the blog on assessment of new ideas and practical application of the chosen new product designs (Di Guardo, Castriotta, 2013, pp. 84, 85). IdeaConnections organize solving problems, designing new products and elaborating innovative technological solutions for companies by teams of prosumers, who work collaboratively in the Virtual thinkspace of the platform. Companies propose prizes for the best innovative solutions which meet their expectations. The platform presents conversations, articles and interviews with authors of innovations, also proposes free Innovation newsletter for members of the crowd. IdeaConnections possess links to other sites and social networks (Facebook, Twitter, etc.) for sharing and discussing of innovative ideas, designs and new technologies by own users (Battistella, Nonino, 2012, p. 564). InnoCentive is a team problem-solving platform for innovative company-clients. The platform organizes interactions between companies looking for innovative elaborations and the crowd. Members of the crowd are scientists, prosumers from different countries, who formally decide to form a team and share the prize for the best collective solution of determined by the company-client problem. The company presents a problem for solving, dissects the problem into smaller challenges and describes connected with them expectations. Solvers register on the InnoCentive website, read the challenge and within a specific timeframe generate and submit elaborated by them innovative solutions. InnoCentive evaluates the proposed solutions in accordance with expectations of the company, next chooses from them the best solutions and integrates them back as winning elaboration which is the answer to the original determined problem (Vuculescu, Bergenholtz, 2014, p. 124). The LEGO is the Danish company of bricks. It collaborates with the Cuusoo firm managing own CP in Tokyo, that provides individualized crowdsourcing services also PRM for its firm-clients such as LEGO, Muji and Nissan. Relationship management with the LEGO prosumers by the Cuusoo firm during cooperation with the LEGO company in open innovation process activities on the LEGO Cuusoo platform are presented in table 4.

*Table following on the next page*

*Table 4. Prosumer relationship management on the LEGO Cuusoo crowdsourcing platform (elaboration based on: Schlagwein, Bjørn-Andersen, 2014, pp. 761-764, Lego Ideas: a leading crowdsourcing platform in the Toy Industry. Retrieved 4.11.2017)*

Open innovation process activity	Prosumer relationship management by	
	the Cuusoo firm – the manager of the crowdsourcing platform	the LEGO company looking for the innovative products
Foresight	<ul style="list-style-type: none"> <li>• monitoring interactions with prosumers and their discussions on new expectations, possible solutions in the LEGO new products</li> <li>• organizing communication with prosumers</li> </ul>	<ul style="list-style-type: none"> <li>• listening to new values, needs of customers, expected changes (also technological) in the LEGO offer; they are also proposed by consumer-fans of social networks on the Internet</li> </ul>
Generation of new ideas	<ul style="list-style-type: none"> <li>• enabling prosumers to generate and submit LEGO-related ideas and collect user ideas which might be developed into new product</li> </ul>	<ul style="list-style-type: none"> <li>• determining by the LEGO experts the best ideas which may be candidates for implementation</li> </ul>
Evaluating design ideas	<ul style="list-style-type: none"> <li>• proposing prosumers various options of evaluating, commenting, and voting on design ideas on the platform</li> </ul>	<ul style="list-style-type: none"> <li>• evaluating the presented design ideas by the LEGO experts on the base of votes and qualitative discussion of prosumers</li> </ul>
Innovation elaboration, testing	<ul style="list-style-type: none"> <li>• proposing prosumers using bricks, software or combination of them to prepare designs for potential new products</li> <li>• organizing voting (a market test) before implementation of the best new product design</li> </ul>	<ul style="list-style-type: none"> <li>• highly voted by prosumers and reviewed by the LEGO design idea of new product becomes part of the LEGO's product offerings</li> </ul>
Innovation application, development	<ul style="list-style-type: none"> <li>• cooperating with prosumers and the LEGO company during preparing a complete design of the new product on the platform</li> <li>• organizing prosumers uploading a complete design of accepted new product to the platform</li> </ul>	<ul style="list-style-type: none"> <li>• engaging the LEGO personel in cooperation with external firm-partners (if it is required) during implementation of accepted new product</li> </ul>
Innovation promotion, sale, diffusion	<ul style="list-style-type: none"> <li>• providing communication and collaboration between the LEGO company and the designer of accepted new product in its e-marketing</li> <li>• making possible prosumers promoting new products via the community of the platform and users' social media channels</li> </ul>	<ul style="list-style-type: none"> <li>• placing the new product models in catalogues, involving prosumers in e-promotion, selling new products via LEGO online and/or physical channels</li> <li>• granting the owner of winning new product idea a revenue share on the sales of the new product</li> </ul>

## 6. CONCLUSION

Development of the Internet possibilities has created new opportunities to capitalize on synergic effects of using knowledge, experience, creativity and ability of prosumers, and integration of their work during open innovation, also new product development on CPs. Prosumers are the most valuable resources and workers of CPs, and they create market values of these platforms. The paper proposes the model of providing services in open innovation process activities by prosumers and other users of CPs during PRM by them in open innovation process activities. The presented concept of PRM connects motivating prosumers with organizing communication and collaboration with them by the manager(s) and/or the innovative company(-ies) in open innovation process activities on CPs. Building the community of the most creative and engaged prosumers and improvement of PRM on CPs enable these platforms to prepare the expected by the innovative market, also the most profitable and/or cost effective innovation solutions for companies.



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## RELATIONSHIP MACROECONOMIC INDICATORS WITH FINANCIAL STABILITY OF CONSTRUCTION COMPANIES IN THE CZECH REPUBLIC

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### ABSTRACT

*According to Ministry of industry and trade in the Czech Republic, construction is one of the largest sectors of the country economy and still continues to recover after the global financial crisis of 2007-2008. At the same time, the statistical data, presented by Eurostat, allow us to note the overall economic development of the country during the last 10 years. These observations lead to the necessity of determining relationship between the economy of the country and the situation of the construction industry on purpose to create the future strategy of development. The aim of the research is to show the influence of the selected macroeconomic indicators on the financial stability of construction companies in the Czech Republic. To identify the impact of external factors on financial stability of construction companies correlation and regression analysis for years 2007-2015 were used. This research was carried out in two main steps. Firstly was explored the influence of three important macroeconomic variables: real gross domestic product (CDP), inflation rate and unemployment rate on profitability (ROA, ROE) and liquidity (Current Ratio) ratios of construction industry in the country overall and, as a second step, on financial stability of the company "Metrostav" in particular. The company was chosen as one of the most successful construction companies operated in the Czech Republic. Results of correlation and regression analysis are presented in four separated tables. In conclusion, based on the results of calculations and analysis, an assessment of the relationship between the country economy and the success of companies was made. In addition, recommendations for future research were created.*

**Keywords:** *Construction, Financial Analysis, Correlation analysis, Regression, Czech Republic, Metrostav*

### 1. INTRODUCTION

According to the Ministry of Industry and Trade in the Czech Republic, construction is one of the largest sectors of the country economy and still continues to recover after the global financial crisis of 2007-2008 (European Commission, 2017). Importance of the construction sector in the economy of the country can be determined by the share of gross value added in GDP (which is 5-6% in the Czech Republic) and the number of employed in the national economy (6% of the working-age population) (Lewis, 2004). At the same time, construction industry strongly depends on the stability of government policies and current priorities of funding from the state budget (Silva and Chávez, 2015). Current business environment is characterized by a high level of dynamism, instability and competition. For example, the 2007 financial crisis caused a decrease in demand for real estate in 2008 compared to 2007, by about 1/3. As a result, construction investment has been curbed, and this fall has been reflected in all companies (Czech Statistical Office, 2016). Due to impossibility to control external factors,

companies should constantly monitor all economic changes and find relationship between the strategy of the company and the external environment. Information about external environment could help create a company development strategy with timely response to any changes and to make effective decisions to increase financial stability of the company (Silva and Chávez 2015). Depending on the nature of the influence of factors, they are divided into factors of direct and indirect influence. Direct influence factors (suppliers, consumers, competitors, regulators, partners and others) directly affect the company and depend on the activities of the organization (Markova and Kuznetsova, 2008). The most difficult to assess the influence of indirect factors (macroeconomic factors). Since the range of macroeconomic factors is very wide, managers often face the problems of selecting right indicators. After studying the available literature, the most common and available macroeconomic indicators were selected: GDP, Inflation Rate and Unemployment Rate. Impact of macroeconomic indicators on the financial stability of the Czech construction industry and on the financial stability of one of the most successful construction companies in the country "Metrostav" for the 2007-2015 period by correlation and regression analysis were defined.

## **2. LITERATURE REVIEW**

Environment of the construction industry is a complex system of related factors, as a political and economic situation, development of science, technologies, customer needs, competitors, geographical location and others (Akinsola et al., 1997). Bennett (1991) in review of project management theory argues that the unpredictability of changes of environment inhibits the construction progress. According to the studied resources there are a large number of methods for assessing the influence of external factors: analytical, statistical, mathematical methods. One of the most popular is PEST-analysis, where Porter (1991) divided all external factors into 4 main groups: political, economic, social and technological factors. There are other variations of analysis PESTLE, SLEPT and STEPLE-analyzes with consideration on additional factors: legal, environmental, socio-demographic and ethnic factors (Srdjevic et al., 2012). Since the changes firstly affect the finance sector, most of the found works examined the impact of macroeconomic factors on the banking sector. But research results are inconsistent and sometimes contradict each other, what can be explained by considering different periods, different countries, using different methods (linear regression, OLS estimation approach, feasible generalized least squares method, GMM estimation approach, random effects estimation) and different indicators. According to the studied resources, the most commonly used external factors affecting the financial health of companies are Gross Domestic Product (GDP) and Inflation Rate. For example, Kanwal & Nadeem (2013) after analyzing the activities of EU companies agreed on positive significant relation between profitability, ROA and GDP, other researchers (Pasiouras & Kosmidow (2007), Bokpin, (2009)) affirm the negative and significant relation. At the same time, Basto, Nakamura & Basso (2009) argue that inflation does not have influence on company finance, when Sett & Sarkhel (2010), Mlinaric, Misevic, and Arneric (2017) find that inflation is negatively related to profitability. Korajczyk & Levy (2003), Bastos, Nakamura & Basso (2009) and Bokpin, (2009) identify other groups of macroeconomic factors affecting the financial condition of enterprises (import, export, demography, public debts, market capitalization, unemployment rate and etc.).

## **3. RESEARCH METHOD**

The main methods of this study are regression and correlation analysis of the relationship between macroeconomic factors and the Czech construction industry in 2007-2015, which includes the crisis and post-crisis periods. The study consists of 3 main parts: analysis of macroeconomic indicators of the Czech Republic, financial analysis of the country construction industry and the construction company "Metrostav", and finally Pearson Correlation and

Regression analysis. As the main macroeconomic indicators GDP Growth, Inflation Rate and Unemployment Rate were selected. Based on analysis of inflation changes and economic growth Layard, Nickell and Jackman (2005) formulated four different stages of financial stability: peak (a high level of business activity), recession (decrease in all indicators), trough (critically low values of stability indicators) and expansion (positive dynamics of stability indicators). In order to determine the financial health of companies financial ratios analysis was applied. Analysis of financial ratios allows determining weaknesses in financial management of the company and identifying problems that need to be addressed to improve the enterprise efficiency (Vítková and Semenova, 2015). Financial ratios include 4 main groups: liquidity, activity, solvency and profitability ratios. In the study the company profitability and liquidity ratios were calculated.

To measure the profitability of construction companies, Return on Assets (1) and Return on Equity (2) ratios were selected.

$$\text{Return on Assets (ROA)} = \text{Net Income} / \text{Total Assets} \quad (1)$$

$$\text{Return on Equity (ROE)} = \text{Net Income} / \text{Shareholder's Equity} \quad (2)$$

ROA measures profit and reflects the efficiency of financial management to earn profits using financial and real resources. ROE ratio reflects the efficiency of financial management to transform every unit of shareholder's equity into profit (Edum-Fotwe, Price and Thorpe, 1996). Liquidity can be defined as the ability to meet the obligations in time and in full scale. There are three types of liquidity ratios: current ratio, quick ratio and cash ratio. Current ratio have been chosen for the analysis (Nývtlová and Marinič, 2010).

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities} \quad (3)$$

For calculation of financial ratios, solid database was used which includes information about more 16,000 companies in the Czech Republic for the 2007-2015 period. The database of Czech companies was obtained from database of the Department of Justice of the Czech Republic. In order to find the relationship between macroeconomic indicators and financial ratios, Pearson Correlation and R-squared in Regression analysis were applied. In correlation analysis, the Pearson correlation coefficient was calculated and analysed. Pearson coefficient ranges between -1 and +1 and quantifies the direction and strength of the linear relationship between the two variables which can be positive (higher levels of one indicator are related to higher levels of the another) or negative (higher levels of one indicator are related to lower levels of the other). The larger the coefficient the stronger the relationship between the variables (Bewick, Cheek and Ball, 2003). Regression analysis assesses the relationship between an outcome variable and one or more variables. The coefficient of determination (r-squared) may be interpreted directly as the proportion of variance in the dependent variable that can be calculated by the regression equation.

$$Y_i = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon \quad (4)$$

Where  $X_1$  - Real Gross Domestic Product,  $X_2$  - Inflation Rate,  $X_3$  - Unemployment Rate,  $\beta_0$  - value of x-intercept,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  - proportionate change in dependent variable due to independent variables,  $\varepsilon$  - error term. The calculation of the correlation and regression analysis was carried out using Excel.

#### 4. ANALYSIS AND DISCUSSION OF DATA OBTAINED

##### 4.1. Analysis of macroeconomic indicators in Czech Republic

In order to analyse the changes in the economic stability of the Czech Republic during the 2007-2015 period, the changes in macroeconomic indicators (GDP growth rate, Inflation Rate and Unemployment Rate) have been considered (Tab.1).

*Table 1: Macroeconomic indicators in the Czech Republic (2007-2015) (Database CZSO)*

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
GDP Growth Rate	5.5	2.7	-4.8	2.3	2.0	-0.8	-0.5	2.7	4.6
Inflation Rate	2.9	6.3	1	1.5	1.9	3.3	1.4	0.4	0.3
Unemployment	5.3	4.4	6.7	7.3	6.7	7	7	6.1	5

According to the received data (Tab.1) it can be concluded that the financial crisis of 2007-2008 had a negative impact on the economic stability of the Czech Republic. The first negative changes occurred in 2008-2009, when the GDP Growth Rate fell to a minimum value (-4.8), inflation sharply increased in 2008 and then fell sharply in 2009 and, as a result, the unemployment has increased to 6.7% in 2009 and to 7.3% in 2010. Macroeconomic indicators turned positive in 2010-2011. But under the influence of new global financial negative changes in 2012-2013, the GDP decreased sharply again. Since 2013 the economic situation began to improve and in just two years (2014-2015), the country's GDP has risen from -0.5 in 2013 to 4.6 in 2015. In addition, changes in inflation since 2010 was slow and steady what means that prices are relatively stable what is good for the economy.

##### 4.2. Financial analysis of construction sector of Czech Republic

For obtaining an insight into a financial situation of the construction industry of the country, financial ratio analysis was applied. The coefficients of liquidity and profitability have been calculated (Tab.2).

*Table 2: Rentability and liquidity ratios of the construction sector in the Czech Republic over the 2007-2015 period (Database of Department of Justice of Czech Republic 2007-2015)*

Quantity/Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
ROE	15.72	16.97	18.39	12.46	9.20	6.45	6.52	6.07	8.45
ROA	7.66	7.92	10.04	7.54	4.55	3.19	3.09	3.85	4.85
Current Ratio	1.33	1.4	1.49	1.48	1.13	1.23	1.26	1.10	1.07

Comparing the data in Table 1 and 2 crisis has adversely affected the financial stability of the construction companies in the Czech Republic. According to the calculation, ROE from the value of 15.72% in 2007 decreased to 8.45% by 2015. A similar situation is observed with ROA which decreased from 2007 to 2015 by 2.81%. Since 2011 the indicators have acquired a tendency to increase the profitability of the construction companies. According to the stability of the companies' ability to pay off their current liabilities for the period under review, it can be concluded, that the companies managed to avoid serious problems of the financial crisis.

To consider the impact of changes in the external environment on a particular business, the financial stability of one of the most successful company "Metrostav" was analysed. The results of the calculation are presented in Table 3.

*Table 3: Rentability and liquidity ratios of Metrostav company over the 2007-2015 period  
 (Database of Department of Justice of Czech Republic)*

Quantity/Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
ROE	20.9	17.4	13.96	12.66	11.36	4.59	4.73	7.14	6.8
ROA	7.56	6.6	5.9	4.85	4,46	2.39	2.33	2.9	2.79
Current Ratio	1.5	1.56	1.62	1.59	1.76	1.93	1.75	1.9	2.28

Changes in the financial performance of Metrostav in general correspond to changes in the indicators of the construction industry of the country. The only significant difference is that, unlike the country construction industry, the company liquidity increased throughout the entire period. These differences can be explained by the company features, as well as by high level of company management.

#### 4.3. Correlation and regression analysis

Due to the negative changes of the financial stability of the construction industry during the 2007-2015 period it is very important to determine how external environment affected these changes, identify the macroeconomic factors that had the greatest impact. For this purpose, correlation analysis of the influence of macroeconomic indicators was applied. The results of the Pearson correlation are presented in Table 4 and 5.

*Table 4: Empirical findings of the correlation between macroeconomic indicators and financial ratios of the construction industry*

	ROA%	ROE%	Current Ratio%	GDP%	Unempl.%	INF%
ROA%	1					
ROE%	0.878	1				
Current Ratio%	0.601	0.776	1			
GDP%	-0.021	-0.118	-0.399	1		
Unempl.%	-0.398	-0.356	-0.154	-0.581	1	
INF%	0.096	0.424	0.362	0.124	-0.445	1

*Table 5: Empirical findings of the correlation between macroeconomic indicators and financial ratios of Metrostav*

	ROA%	ROE%	Current Ratio%	GDP%	Unempl.%	INF%
ROA%	1					
ROE%	0.994	1				
Current Ratio%	-0.767	-0.742	1			
GDP%	0.171	0.281	0.135	1		
Unempl.%	-0.417	-0.458	-0.085	-0.581	1	
INF%	0.491	0.481	-0.482	0.124	-0.445	1

According to Anderson, Sweeney and Williams (1990) correlation is high when its value is above 0.70. The results of the correlation presented in Table 4 and 5 show, that the majority of macroeconomic indicators have a weak positive and negative relationship with the financial coefficients of construction companies with correlation less than 0.5. The most significant positive relationship was found between inflation and profitability indicators, inflation and liquidity of construction industry, and negative between inflation and liquidity of Metrostav. This discrepancy can be explained by the fact that Metrostav is a large company with an active position on the international market in contrast to the general construction industry, which

includes a large number of small and medium-sized companies operating only in the domestic market. This affected the degree of significance of GDP, which influence on the liquidity of the country construction industry is higher. The weakest link was found between unemployment and company liquidity, what can be explained by the low level of unemployment in the country. In order to clarify the data of the correlation analysis the regression analysis was applied. While the correlation analysis determines the strength of the linear relationship between a pair of variables, regression analysis measures the relationship in the form of an equation.

*Table 6: Empirical findings of the regression between macroeconomic indicators and financial ratios of the construction industry*

External factors	Regression ROA		Regression ROE		Regression CR	
	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value
INF %	0.176	0.543(NS)	0.162	0.255(NS)	4.247	0.34(NS)
GDP %	-0.129	0.675(NS)	0.08	0.749(NS)	-1.0	0.28(NS)
UN %	-0.07	0.632(NS)	-0.055	0.469(NS)	-7.94	0.66(NS)
R	-		-		-	

(NS) = Not significant

*Table 7: Empirical findings of the regression between macroeconomic indicators and financial ratios of Metrostav*

External factors	Regression ROA		Regression ROE		Regression CR	
	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value
INF %	0.64	0.311(NS)	1.85	0.311(NS)	-0.15	0.14(NS)
GDP %	0.12	0.691(NS)	0.57	0.517(NS)	-0.002	0.96(NS)
UN %	0.44	0.738(NS)	1.4	0.712(NS)	-0.11	0.35(NS)
R	-		-		-	

(NS) = Not significant

The empirical analysis of the regression confirms the result of the correlation analysis. According to empirical findings of the regression there are no strong links between the selected macroeconomic indicators with the profitability and liquidity of the construction companies of the Czech Republic.

## 5. CONCLUSION

The purpose of this study was to identify the relationship between macroeconomic indicators and the financial stability of the Czech construction companies for 2007-2015 years by correlation and regression analysis. Despite the 2007 financial crisis has affected the financial stability of the construction companies in the Czech Republic, smooth growth and a decline in GDP, low inflation, low unemployment during the period under review, with slight jumps in 2009 and 2011 and the subsequent cyclical decline by 2015, indicate a fairly stable situation in the country. Due to relatively stable situation insignificant links between the selected macroeconomic indicators with the financial stability of the country construction industry were revealed. According to the results of correlation and regression analysis, influence of the selected macroeconomic factors on the construction industry of the country differs from the impact on the company "Metrostav" not only by intensity but also by character. This observation highlights the importance of an individual approach in each case, depending on the characteristics of the company. In our study, we found a difference of influence of GDP on the financial stability, while its impact on the liquidity and profitability of the country construction industry is insignificant negative, the impact on the ratios of the company "Metrostav" is insignificant positive. In addition, depending on the degree of influence of inflation in both

cases, there is a positive impact on profitability and negative on liquidity, but the impact on the financial stability of the company "Metrostav", due to an active position in the international market, is more intensive. Due to the stable situation in the labor market, the minimum link between unemployment and financial ratios was identified. This study once again confirms the importance of paying attention to all possible internal and external factors in the management of the company. According to the results the influence of macroeconomic factors depends on features of the financial management methodology of the company. Furthermore, external factors play a great role in a financial decision-making process. Information about changes in external environment and knowledge about their influence on company activity provides managers with support in creating effective financial strategy for stable and successful development. The suggestion for further research assumes to extend the sample as well as investigated period, choose others external factors such as exchange rate, imports, exports, tax rates and income level, which are not highly correlated between each other and create a regression model, in order to make results more significant and reliable. In addition, other methods of econometrics should be used to confirm the results.

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## **INTERVAL ANALYSIS AS A METHOD OF MEASUREMENT OF UNCERTAINTY IN THE CHECK-LIST METHOD APPLIED TO IDENTIFICATION OF STAGE PHASE OF COMPANIES**

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### **ABSTRACT**

*Check-list method is used to determine the phase stage in analysis of organization growth. For the application of the method is needed obtaining answers to a list of statements describing a status of development of a company. The method corresponds with the basis four-phase model of development of an organization including the following phases: existence, growth, maturity and decline. For each of the developmental phases a separate control list was prepared, each one includes 15 synthetic criteria and 42 analytical criteria. A total number of analytical criteria amounts to 168 and they are the identifiers of developmental phases. Application of the method in practice runs in three stages. The first stage of test is limited to specification, on the basis of the collected information of a degree in which particular statements pertain to an examined organization. The uncertainty of analysis arises when more than one person is answering the questions. The mathematical methods of analysis of the influence of uncertainty are based on the four general attempts: deterministic with elements of statistical analysis, stochastic, using fuzzy logic and using interval computations. In the presented analysis the possibility and way of application of the interval arithmetic is discussed. The results are compared with those obtained by application of statistical methods.*

**Keywords:** *Check-list, Interval analysis, Management, Phase growth, Statistical analysis*

### **1. INTRODUCTION**

The idea of describing the organization growth by identification of its phase stage goes to models described by I.Adizes (Adizes, 1979), crisis models by L.E.Greiner (Greiner, 1972), K.Bleicher (Bleicher, 1979; Pumpin, Prange, 1991). Only R.E.Quinn and K.Cameron (Quinn, Cameron, 1983) have described a development of an organization using a „circular” model, which reflects best the actual process of development of an organization in practice. Having in mind the differentiation of models, a basic four-phase model of development of an organization may be accepted. The model includes the following phases: existency, growth, maturity and decline (Kozien, 2002; Kozien, 2017). The defined phases are characterized with specific features (identifiers). Passages between subsequent phases may occur through an evolution or as a result of a crisis (Bleicher, 1979; Greiner, 1972). Organizations may, in selected functional areas, reach subsequent phases remaining, however, in some of them at the current level of development, and even indicating regress of its development (Kozien, 2002). In the process of diagnosing development of an organization, having in mind stages of its growth, finding the method of determining of the current level of development is important. One of the methods is the Lepard sheet, which makes it possible to diagnose developmental phases and

crises. This method has been developed according to the growth model described by L.E.Greiner (Greiner, 1972). However, C.Pumpin and J.Prange (Pumpin, Prange, 1991), proposed a more universal method of checklists for diagnosis of development of an organization. This method corresponds with the basis four-phase model of development of an organization. The method consists of four checklists containing indicators characteristic for particular phases of development of an organization. Analysis of results is solely of qualitative character. Identification of phases of development occurs following completion of a test, which comprises of properly formed questions within the so-called checklists, formed separately for each developmental phase. C.Pupin and J.Prange (Pumpin, Prange, 1991) proposed 18 questions for each of the phases. The checklist attempt is not popular method applied in management. Recent the European Commission formulated support for voluntary initiatives promoting diversity management at the workplace across the EU (European Commission, 2012). W.Martz (Martz, 2014) proposed 12 general criteria against which to assess organizational performance. E.Kozien (Kozien, 1999) expanded the checklist method of C.Pumpin and J.Prange (Pumpin, Prange, 1991) by proposing the new 15 synthetic criteria e.g. strategy, purpose, capital, people and the original 42 analytical criteria, which describe the characteristics in each of the phases of development of an organization. The developed expanded original method of checklists makes it possible to conduct qualitative and quantitative analysis of the process of development of an organization. In the paper (Kozien, 2017), the discussion of interpretation of results when different statistical parameters are used was performed. In 60th of the XX century it was formalised theoretical background of the interval arithmetic. In this attempt the real value is identified with individually defined range on the real axis. The basic operations are defined: summation, subtraction, multiplication and division. It is possible to generalize interval analysis with elementary functions (Alefeld, Herzberger, 1983; Kulisch et.al., 2001; Moore, 1966). The author applied the interval arithmetic to choose the values of dynamical damper (Kozien, Smolarski; 2004). This article compares the obtained results for describing the uncertainty in identification of phase of organization growth using interval analysis and classic statistical approaches.

## 2. BASIS OF THE INTERVAL ANALYSIS

Interval analysis is connected with generalisation of the real value  $a$  on a closed range  $[a]$  of the real set  $R$  in the form (1). In this representation, the real value has interval arithmetic interpretation as the point range  $[a]=[a,a]$ . In interval representation the lower limit  $a_{min}$  and upper limit  $a_{max}$  of the value  $[a]$  is defined (1).

$$[a] = [a_{min}, a_{max}] = \{a \in R : a_{min} \leq a \leq a_{max}\} \quad (1)$$

The distance between interval elements can be defined in a form (2). In this case set all of the real compact ranges of the real set with metrics (2) is built a complete metric space.

$$q([a],[b]) = \max\{|a_{min} - b_{min}|, |a_{max} - b_{max}|\} \quad (2)$$

Taking elements of interval set, the well known in arithmetic operations of summation, subtraction, multiplication and division can be defined in the forms (3)-(6).

$$[a] + [b] = [a_{min} + b_{min}, a_{max} + b_{max}] \quad (3)$$

$$[a] - [b] = [a_{min} - b_{max}, a_{max} - b_{min}] \quad (4)$$

$$[a] \cdot [b] = [\min\{a_{\min} b_{\min}, a_{\min} b_{\max}, a_{\max} b_{\min}, a_{\max} b_{\max}\}, \max\{a_{\min} b_{\min}, a_{\min} b_{\max}, a_{\max} b_{\min}, a_{\max} b_{\max}\}] \quad (5)$$

$$\frac{[a]}{[b]} = \left[ \min\left\{ \frac{a_{\min}}{b_{\min}}, \frac{a_{\min}}{b_{\max}}, \frac{a_{\max}}{b_{\min}}, \frac{a_{\max}}{b_{\max}} \right\}, \max\left\{ \frac{a_{\min}}{b_{\min}}, \frac{a_{\min}}{b_{\max}}, \frac{a_{\max}}{b_{\min}}, \frac{a_{\max}}{b_{\max}} \right\} \right], \quad 0 \notin [b] \quad (6)$$

Based on these formulas it is possible to define some of the elementary functions. They are not applied in the article.

### 3. CHECK-LIST METHOD FOR GROWTH PHASE IDENTIFICATION

A check-list method constitutes a tool for diagnosing the development phases of a company. Application of a method means receiving answers to a set of statements describing a status of a development of a company. A four-phase model was approved for analysis of a company, including the following phases: existence, growth, maturity and decline. For each of the phases a checklist was developed, the method was described in detail in (Kozien, 1999). Each list pertains to another phase of development of a company and includes 15 synthetic criteria (the same for all phases) described by 42 analytical criteria (different for each phase). A total number of analytical criteria amounts to 168 and they are identifiers of phases of development. The synthetic criteria are: objective, strategy, capital and cash flow, human resources: managers, employees, style of management, organizational structure (decision-making process), planning, supply, product/service (technological process), turnover, innovations, marketing, advertising, age of the company, environment. Application of the method in practice runs in three stages. The first stage of test is limited to specification, on the basis of the collected information of a degree in which particular statements pertain to an examined organization. The Likert scale is applied to assess the degree of development, accepting the following degrees of the scale:

- concerns entirely (2),
- concerns partially (1),
- difficult to define (0),
- not applicable (-1),
- does not apply in any way (2).

The second stage of test is a quantitative analysis of obtained replies to qualitative criteria for particular phases. The third stage of test focuses on the assessment and analysis of obtained results. In previous authors analyses dispersion measures were referenced to single list of answers on different particular criteria. In article (Kozien, 2017), there was discussed application of different types of parameters of measures of mean values and dispersion measures and their influence on the interpretation of the obtained results. The aim of the paper is to propose to take into account interval analysis attempt, as the alternate to classic statistical attempt to the case when a few lists of answered check-lists are obtained. In this case the only range parameter can be applied to measurement of dispersion for a single criterion in statistical attempt (Kozien, 2017).

### 4. AN EXEMPLARY ANALYSIS

Application of the interval analysis to measure the uncertainty of obtained results, when a few check-lists are obtained is shown on example when five set of 42 answers are taken into account. The answers are given in Table 1 for each phase and for five check-lists (A, B, C, D and E).

Application of the interval analysis to measure uncertainty of obtained answers in different check-lists and for different criteria are based on the following assumptions:

- The answers obtained for one criteria and for each phase is assumed as interval value  $[a]$ , where  $a_{min}$  is the minimal obtained answer, and  $a_{max}$  is the maximal obtained answer. When the answers are the same or there is the only one check-list the interval value is the real value  $[a] = a = a_{min} = a_{max}$ .
- For each phase the average interval answer based on the interval summation rule (3)  $[x] = [x_{min}, x_{max}]$  is calculated.
- The obtained for each phase values  $[x]$  are base to identify the phase stage of the analyzed enterprise, as alternate way to using the values of averaged values of all answers  $\bar{x}$  and their standard deviation  $\sigma$ .

Achieved values of estimators for considered example (data given in Table 1) for particular phases of development are placed in Table 2.

Results of the analyses leads the following remarks:

- The applied interval parameters and the statistical ones identify that the company is in the growth phase.
- The second phase which is identified with lower intensity by both of the attempts in the maturity one.
- The establishment and decline phases are excluded by both of the attempts.
- The obtained averaged values for each phase  $\bar{x}$  are almost the same as mid range value of the interval  $(x_{max} - x_{min})/2$  (except the existence phase).
- Estimation of the uncertainty of the obtained answers is much more precise for a few check-list case, when the interval analysis is used. For the analyzed example the obtained double values of standard deviations are relatively high in comparison with total length of the interval range (application of standard deviation parameter for a probe consists of few components are wrong; the better parameter in this attempt is the range between maximal and minimal values).

*Table following on the next page*

Table 1: Answers obtained by five check-lists (A, B, C, D and E)

Criteria No.	Phase / Answers																			
	Existence					Growth					Maturity					Decline				
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
1	-2	-2	-1	-2	-1	-2	-1	-2	-1	-1	-2	-1	-2	-1	-1	-2	-2	-1	-2	-2
2	-2	-1	-1	-1	-1	-2	-1	-2	-1	-1	-2	-2	-2	-2	-1	-2	-1	-2	-2	-1
3	-2	-1	-2	-1	-2	-2	-1	0	-1	0	-2	-2	-1	-2	-2	-2	-1	-2	-2	-2
4	-2	-1	-2	-1	-2	0	1	1	0	1	-2	-1	-1	-1	-2	-2	-1	-2	-1	-2
5	-2	-2	-1	-1	-1	1	1	1	2	2	-2	-1	0	-1	-2	-2	-1	-2	-1	-2
6	-2	-2	-2	-1	-1	1	2	2	1	2	-1	-1	-1	-1	-1	-2	-2	-1	-1	-1
7	-2	-2	-2	-1	-1	1	1	1	2	1	-1	-1	0	0	-1	-2	-1	-1	-2	-2
8	-2	-1	-2	-2	-1	1	2	1	2	1	0	1	1	0	0	-2	-1	-2	-2	-2
9	-2	-2	-2	-2	-2	1	1	2	1	2	0	-1	0	0	-1	-2	-1	-2	-2	-2
10	-2	-1	-2	-1	-2	1	2	2	1	2	0	0	1	0	1	-2	-2	-2	-2	-2
11	-2	-1	-1	-2	-2	1	1	1	2	1	1	1	1	1	1	-2	-2	-1	-1	-2
12	-2	-1	-2	-1	-2	1	1	2	2	2	1	1	2	2	1	-2	-1	-1	-2	-2
13	-2	-2	-2	-1	-1	1	2	1	2	1	1	2	1	2	1	-2	-1	-1	-2	-2
14	-2	-2	-2	-2	-2	1	2	1	2	1	1	1	2	2	1	-2	-1	-2	-2	-2
15	-2	-2	-2	-1	-2	1	1	2	1	1	1	2	2	1	2	-2	-2	-2	-2	-2
16	-2	-1	-2	-2	-2	2	1	2	2	2	1	2	2	2	1	-2	-2	-1	-1	-2
17	-2	-1	-2	-2	-1	2	1	2	2	2	1	2	2	1	1	-2	-1	-2	-1	-2
18	-2	-1	-1	-2	-1	2	1	1	2	2	1	2	1	1	2	-2	-1	-2	-1	-2
19	-2	-1	-1	-1	-1	2	2	1	2	2	1	2	1	2	2	-2	-2	-2	-2	-2
20	-2	-2	-2	-2	-2	2	2	1	2	2	1	1	2	2	2	-2	-1	-2	-1	-1
21	-2	-2	-2	-1	-1	2	2	2	2	2	1	1	1	2	1	-2	-1	-2	-1	-1
22	-2	-2	-1	-1	-1	2	1	2	1	1	2	1	2	1	2	-2	-2	-1	-1	-2
23	-2	-2	-2	-2	-2	2	1	2	2	2	2	2	1	1	2	-2	-1	-2	-1	-2
24	-1	-2	-1	-1	-2	2	1	2	1	2	2	2	1	1	2	-1	-2	-2	-2	-2
25	-1	-2	-1	-1	-1	2	2	1	2	2	2	2	1	1	2	-1	-1	-2	-1	-2
26	-1	-2	-2	-1	-2	2	2	2	1	2	2	2	1	2	1	-1	-2	-1	-1	-2
27	-1	-1	-2	-1	-1	2	2	1	2	1	2	2	1	1	2	-1	-2	-2	-2	-1
28	-1	-2	-2	-1	-1	2	1	2	1	2	2	1	2	1	2	-1	-1	-1	-1	-1
29	-1	-2	-2	-2	-2	2	1	2	1	2	2	1	1	2	1	-1	-2	-2	-1	-2
30	0	-1	-1	0	-1	2	2	2	2	2	2	1	1	2	2	-1	-2	-1	-1	-2
31	0	-1	0	0	0	2	1	2	2	1	2	1	1	2	2	-1	-1	-1	-1	-2
32	0	-2	-1	0	0	2	2	2	2	2	2	2	1	1	2	-1	-2	-2	-1	-2
33	0	0	-1	-1	0	2	2	1	2	2	2	1	2	2	2	-1	-2	-2	-2	-1
34	0	0	0	0	-1	2	2	1	2	1	2	2	2	2	2	-1	-1	-1	-1	-1
35	0	-1	0	0	-1	2	2	1	2	2	2	1	1	2	2	0	-1	0	0	0
36	0	-1	0	0	0	2	2	2	1	2	2	2	1	1	2	0	-1	-1	-1	0
37	0	0	-1	0	0	2	1	2	2	2	2	2	1	1	1	0	0	0	0	0
38	1	-1	-1	1	0	2	1	2	2	1	2	2	1	2	2	0	0	0	-1	-1
39	1	0	0	1	0	2	2	1	2	2	2	1	2	2	1	1	0	0	1	0
40	1	0	0	1	0	2	1	1	1	2	2	2	1	1	2	1	1	1	1	1
41	2	1	2	0	2	2	1	2	2	2	2	1	2	1	2	2	1	1	2	1
42	2	0	2	2	2	2	2	2	1	1	2	1	2	2	2	2	1	2	1	1

Table 2: Resultant values of parameters for all phases of development

Estimator	Phase			
	Existence	Growth	Maturity	Decline
$x_{\min}$	-1.62	0.83	0.47	-1.57
$x_{\max}$	0.62	1.79	1.43	-0.74
$(x_{\max} - x_{\min})/2$	-0.5	1.31	0.95	-1.16
$\bar{x}$	-1.07	1.41	0.98	-1.21
$\sigma$	1.01	0.89	1.21	0.97

## 5. CONSLUSION

The checklist method is a helpful tool used in order to diagnose the development of an organization and to outline the possible directions of its development. In the proposed by the Author original method of qualitative analysis (original checklist, possibility of application for different number of obtained check-list) is a powerful method of identification of phase of growth for enterprises. Results of analyses show that methods of interval arithmetic are useful tool to describe uncertainty of obtained answers. It is important, when a few check-lists are obtained and when answers given by people are subjective. When the number of check-list are relatively high (more than about 10-20), using statistical parameters as mean value and standard deviation (or median and average deviation from the median) are suggested. The checklist method in practice confirms that the examined organizations display the characteristics of more than one phase of development.

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## IMPACT EVALUATION USING OPEN ACCESS SOFTWARE MATCHING PROCEDURE FOR EMPLOYMENT PROGRAM

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### **ABSTRACT**

*The paper deals with the issue of impact evaluation which is usually defined in the literature as assessment of how the intervention being evaluated effects outcomes. Additionally, it provides a review of using open access software matching procedure using modern quantitative approach towards evaluating employment program. The availability of open access software matching procedures nowadays makes it possible to estimate the causal effects for the employment programs. The usual critique on the effectiveness of the employment programs is that such programs are not effective and are not meeting the goals (the most evident goal is exits into employment and termination of unemployment benefits). What is more, the culture of program evaluation is on very low level and the need is to develop independent evaluation. Therefore, the implementation of impact evaluation in practice can help strengthen the evidence base for development policies and programs and adds to more effective spending of resources and improve people's lives.*

**Keywords:** *Impact evaluation, Causal effect, Open access software matching procedure, Employment program, Effectiveness*

### **1. INTRODUCTION**

When estimating causal effects for employment programs the availability of software to produce estimates is very important, since in previous years software limitations made it difficult to implement many of the more advanced matching methods. Nowadays, this area is constantly updating, providing more and more chances to implement up to date matching methods. Open access software matching procedures are numerous and work in different statistical packages, for example R, Stata, SPSS, SAS (Stuart, 2010). In this paper we focus on matching software for Stata provided by Becker and Ichino (2002). This matching software enables to estimate propensity score and to test the balancing hypothesis and provides various matching estimators of the average treatment effect for the treated based on the propensity score. What does matching actually refer to? Very broadly, we can define matching to be any method that aims to equate (or balance) the distribution of covariates in the treated and control group (Stuart, 2010). Treated group refers to cases that received some kind of the treatment (for example participated in employment program), whereas control group refers to those who did not receive the treatment (for example cases that did not participate in employment program). Since data usually do not come from randomized experiments, but rather from observational studies, we cannot guarantee that the treated and control group will randomly differ from one another only on all background covariates (observed and unobserved). We cannot guarantee that the treated and control group are matched in such a way that they would differ only in the treatment received and in such a case estimated causal effect may be biased by the existence of confounding factors. Propensity score matching is a way to correct the estimation of causal effects. It is based on the idea that the bias is reduced (not eliminated) when the comparison of outcomes is implemented when treated and control group are as similar as possible. The paper is structured as follows: after the brief introduction, we focus on the impact evaluation and causal inference, in section 3 we present propensity score matching as a way to correct the estimation of causal effect and a possible approach to impact evaluation, section 4 gives a short overview of matching software, whereas section 5 concludes.



## 2. IMPACT EVALUATION AND CAUSAL INFERENCE

Gertler et al. (2011) define the impact evaluation as the assessment of changes in the well-being of individuals which can be attributed to a particular project, program or policy where the central challenge in carrying out impact evaluations is to identify the causal relationship between the project, program or policy and the outcomes of interest. As an example, we observe the outcomes of individuals participating in the employment program and the outcomes of those not participating in the employment program. The main problem of causal inference comes from the fact that we cannot observe an individual in two different situations at the same time. In the context of estimating the effectiveness of employment program this would mean that we cannot observe outcome of an individual which participates in certain employment program and his/her outcome in case when he/she not participates in employment program at the same time. This actually means that we have to compare the actual outcome with the counterfactual outcome. The latter is of great importance as if we do not have the evidence of the counterfactual outcome then it is impossible to say anything about the causal effect. The evidence of the counterfactual outcome and the assessment of the treatment effect can actually be defined as the problem of missing data (see, for example Amemiya, 1985; Baltagi, 1995; Briggs, 2004; Caliendo and Hujer, 2006; Dehejia and Wahba, 1999, 2002; Hujer and Caliendo, 2000; Ichino, 2006). However, only one outcome is actually observed. What would the outcome have been had an individual not participated in the employment program, the counterfactual, cannot be observed (see, for example Fraker and Maynard, 1987; Heckman, 1990, 1998; Heckman, Ichimura and Todd, 1997; Južnik, 2012; Lee, 2005; Verbeek, 2004; Wooldridge, 2002). And this is precisely what gives rise to the evaluation problem. And with the available information on individuals not participating in employment program the counterfactual for individuals participating in employment program can be derived. A convenient framework for defining causal quantities and deriving corresponding estimators as well as the assumptions required offers the Rubin causal model (Rosenbaum and Rubin, 1983, 1984). Rubin causal model also emphasizes the counterfactual situations of the units in the treated and control condition: (1) "What would the outcome of the treated units have been had they not been treated?" and (2) "What would the outcome of the untreated have been had they been treated?" We can present formal framework as it follows: each unit  $i$  has two potential outcomes: (1) the potential control outcome  $Y_i^0$  under the control condition ( $D_i=0$ ) and (2) the potential treatment outcome  $Y_i^1$  under treatment condition ( $D_i=1$ ).  $Y_i^1$  and  $Y_i^0$  are called potential outcomes because these are the unknown but fixed outcomes before unit  $i$  gets assigned or selects into the treatment or control condition. After treatment, only one of the two potential outcomes is revealed: the potential treatment outcome for the treated and the potential control outcome for the untreated. The respective other potential outcomes remain hidden. Usually two causal quantities are of main interest:

1. the average treatment effect for the overall target population or sample (ATE) (see, for example Steiner and Cook, 2013):

$$ATE = E(Y^1 - Y^0) = E(Y^1) - E(Y^0)$$

2. the average treatment effect for the treated (ATT) [see, for example Steiner and Cook, 2013):

$$ATT = E(Y^1 - Y^0 | D = 1) = E(Y^1 | D = 1) - E(Y^0 | D = 1)$$

The choice of the causal quantity of interest depends on the research question, whether the interest is in estimating the treatment effect for the overall target population or the treatment effect for the treated units only. If we were able to observe both potential outcomes ( $Y^1, Y^0$ ) we could determine the causal effect for each unit and simply estimate ATE and ATT by averaging the difference in potential treatment and control outcomes. However, in practice we never observe both potential outcomes simultaneously and are therefore faced with the fundamental problem of causal inference. The outcome we actually observe depends on the treatment status, at the group level we can only observe the expected treatment outcome for the treated and the expected control outcome for the untreated. These conditional expectations differ in general from the overall averages due to the differential selection of units into the treatment and control condition. The estimator will be unbiased only if we could guarantee an ignorable selection or assignment mechanism. One way to establish this is through randomization which ensures that potential outcomes are independent of treatment assignment (Cameron and Trivedi, 2005). But in practice, randomized experiments are frequently not possible due to practical, ethical or other reasons. In such cases, researchers have to rely on observational studies. When estimating causal effects using observational data, treatment assignment typically takes place by self, administrator or third person selection rather than randomization. Such style of selection process very likely results in the treatment and control group that differ not only in the number of baseline covariates, but also in potential outcomes which cannot be considered as independent of treatment selection (Steiner and Cook, 2013). In this case we need a carefully selected set of observed covariates  $\mathbf{X}$  such that potential outcomes are independent of treatment selection conditional on  $\mathbf{X}$  (Steiner and Cook, 2013):

$$(Y^0, Y^1) \perp D | \mathbf{X}$$

If we observe such a set of covariates and if treatment probabilities are strictly between 0 and 1, the selection mechanism is said to be strongly ignorable. The strong ignorability assumption is frequently called conditional independence assumption (CIA). From a practical point of view, this means that we have to observe all covariates  $\mathbf{X}$  that are simultaneously associated with both treatment status  $D$  and potential outcomes ( $Y^0, Y^1$ ). If this is the case, treatment selection is said to be ignorable and statistical methods that appropriately control for these confounding covariates are potentially able to remove all the bias (see, for example Cameron and Trivedi, 2005; Larsson, 2003).

### 3. PROPENSITY SCORE MATCHING

Matching methods try to match treatment and control units on observed baseline characteristics  $\mathbf{X}$  in order to create comparable groups just as randomization would have done. If treatment selection is ignorable and if treatment and control groups are perfectly matched on  $\mathbf{X}$ , then potential outcomes are independent of treatment selection (Cameron and Trivedi, 2005). Creating a matched dataset involves the following main decisions (Stuart, 2010):

- the choice of a distance metric on observed baseline covariates that quantify the dissimilarity between each treatment and control unit;
- the decision on a specific matching strategy that is, the number of matches for each unit, the width of the caliper for preventing poor matches, and whether to match with or without replacement;
- the choice of an algorithm that actually performs the matching and creates the matched dataset.

All in all, matching results in a complete dataset of actually observed and imputed potential outcomes and thus allows the estimation of average treatment effects. In practice, matching reaches its limits when treatment and control units are matched on a large set of covariates. With an increasing number of covariates, finding matches that are identical or at least very similar on all observed baseline characteristics becomes inherently impossible due to sparseness of finite samples. Therefore, it would be advantageous to have a single composite score – propensity score. Propensity score techniques try to solve the sparseness problem by creating a single composite score from all observed baseline covariates  $X$ . Units are then matched on the basis of that one-dimensional score alone. The propensity score is defined as the conditional probability of treatment exposure given the observed covariates  $X$  (Cameron and Trivedi, 2005):

$$p(\mathbf{X}) = \Pr(D = 1|\mathbf{X})$$

A unit's propensity score indicates its probability of receiving treatment given the set of observed covariates. Propensity score matching is probably the most frequently applied class of propensity score techniques. As it was already mentioned, propensity score matching presents a way to correct the estimation of causal effects. It is based on the idea that the bias is reduced (not eliminated) when the comparison of outcomes is implemented when treated and control group are as similar as possible. This approach has an intuitive appeal, but rests on a very strong assumption: that any selection of unobserved variables is trivial in the sense that the latter do not affect outcomes in the absence of treatment (Vandenberghe and Robin, 2004). This identifying assumption for matching is known as the conditional independence assumption (CIA). Under the CIA, estimators relying on matching techniques can yield unbiased estimates of ATT. They allow the counterfactual outcome for the treatment group to be inferred and therefore for any differences between the treated and non-treated to be attributed to the treatment (for a more detailed discussion see, for example Becker and Ichino, 2002; Cameron and Trivedi, 2005; Dehejia and Wahba, 2002).

#### **4. SHORT OVERVIEW OF MATCHING SOFTWARE**

Since the aim of this paper is to provide a review of open access software matching procedure in estimating the causal effects for employment program, we therefore give in this chapter a short overview of matching software for Stata provided by Becker and Ichino (2002). When trying to estimate the causal effects, one is inevitably faced with multidimensionality problem. Propensity score techniques are based on creating a single composite score from all observed baseline covariates  $X$ . Units are then matched on the basis of that one-dimensional score alone. The propensity score is defined as the conditional probability of treatment exposure given the observed covariates  $X$  (Becker and Ichino, 2002). A unit's propensity score indicates its probability of receiving treatment given the set of observed covariates. If we want to estimate the average treatment effect for the treated, the balancing hypothesis has to be satisfied. That means that for a given propensity score exposure to treatment is random and therefore treated and control units should be on average observationally identical (Becker and Ichino, 2002). The program `pscore.ado` estimates the propensity score and tests the balancing hypothesis according to the proposed algorithm by Becker and Ichino (2002):

1. "fit the probit (or logit) model;
2. split the sample into  $k$  equally spaced intervals of the propensity score, where  $k$  is determined by the user and the default is 5;
3. within each interval, test the average propensity score of treated and control units does not differ;
4. if the test fails in one interval, split the interval in half and test again;

5. continue until in all intervals the average propensity score of treated and control units does not differ;
6. within each interval, test that the means of each characteristics do not differ between treated and control units –this is a necessary condition for the balancing hypothesis;
7. if the means of one or more characteristics differ, inform the user that the balancing property is not satisfied and that a less parsimonious starting specification that includes all the covariates as linear terms without interactions of higher order terms is needed.”

Steps 2-7 of the algorithm can be restricted to the common support. This restriction implies that the treatment and control group need to overlap, share a region of common support on the propensity score. Group membership is not perfectly predictable from observed covariates. Otherwise, the treatment and control group cannot be considered as comparable and causal effects cannot be estimated without relying on extreme extrapolations (all observations must have a nonzero probability of being in both the treatment and control group) (Steiner and Cook, 2013). Since the probability of observing two units with exactly the same value of the propensity score is in principle zero (propensity score is a continuous variable), Becker and Ichino (2002) proposed different matching strategies that can be implemented. Such strategies are nearest neighbour matching, radius matching, kernel matching and stratification matching which contrast the outcome of treatment group with outcomes of control group and has each some trade-offs.

## 5. CONCLUSION

Impact evaluation can be classified into a broad range of complementary methods that support evidence-based policy. The latter is the direction in the new European programming period which is given more attention. The main question around which impact evaluations are structured is a question of what are the causal effects of for example employment program on outcome of interest. When estimating the impact of such program one is inevitably faced with the main problem of causal inference, that is the individual cannot be observed in two different situations at the same time. That is why the suitable counterfactual has to be defined. There are several methods available to estimate causal effects. In this paper we provide an overview of propensity score matching which is very widely used method. It is of great importance the availability of software to produce estimates. Open access software matching procedures are numerous and work in different statistical packages. In this paper we focus on matching software for Stata provided by Becker and Ichino. The availability of matching software enables the estimation of the effectiveness of the employment programs, since the resources distributed to the employment programs are enormous. On the other hand, nobody really knows exactly, what works and for whom? The availability of matching software enables the production of vast estimates and therefore a support to policy-makers in order to distribute resources more effectively.

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## **BARRIERS AND FACTORS INFLUENCING THE LEVEL OF COOPERATION OF BUSINESSES WITH PUBLIC ADMINISTRATION INSTITUTES: POLAND AS A CASE STUDY**

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### **ABSTRACT**

*Companies that operate in the contemporary environment and compete for limited resources can achieve their goals more effectively by working with organizations outside the commercial sector, such as universities, business environment institutions or public administration institutions. Partnership between private and public sectors in terms of implementing public tasks has been a greatly promoted instrument in recent years in the United States, the United Kingdom, Germany, France and Italy (Dobrowolski, 2014, p. 138). The prerequisite for cooperation between the two sectors is primarily trust between the private entity and the public partner. It determines willingness of stakeholders to cooperate and willingness to take joint risk. Today, trust in public institutions is understood as a belief in their competence, diligence and integrity of public institutions. We live in the world of global interdependence, declining level of confidence, increasing uncertainty and risk (Castells, 1996; Bauman, 2007; Beck 2004; Hardin 2009). Although cross-perception of sectors is slowly changing - officials and entrepreneurs are increasingly aware of the mutual benefits of cooperation and strive to build it on partnership - there are still many barriers and unidentified areas of possible cooperation. The purpose of this article is to determine the willingness and level of co-operation between Polish companies and public institutions: both governmental and self-governmental and to identify any barriers that may limit this cooperation. In particular, the factors influencing low level of cooperation between enterprises and public administration institutions in Poland were analyzed. This article uses methods of critical literary analysis and statistical analysis of research conducted among 381 Polish companies based in the Podlaskie province (Poland). Spearman's rank correlations were used in the statistical analysis to determine the relationship between the level of cooperation between companies and public administration institution, cooperation with them and potential for tightening it in the future. In conclusion of the study it should be stressed that the researched companies show a rather low level of willingness to cooperate with public sector institutions. In particular, the respondents indicated low level of cooperation with governmental institutions and weak desire to tighten it in the future. The companies that indicated higher level of cooperation with public institutions assessed higher also the possibility of tightening it in the future. Among the factors influencing current cooperation between enterprises and public institutions evaluated lowest were: the offer prepared by administration, the image of administration in Polish society, the experience of cooperation so far. On the other hand, positive changes in such factors as financial support and organizational support for enterprises from the administration would be most likely to improve cooperation between sectors in respondents' opinion.*

**Keywords:** *cooperation, trust, barriers to cooperation, public administration, Poland*

### **1. INTRODUCTION**

An important attribute of modern organisations, regardless of the sector in which they are active, is a certain level of ability to cooperate with their environment, thanks to which they can, in a more effective and economic manner, achieve goals which would be impossible to achieve alone, or which would require significantly greater effort and resources. Researchers discuss the issues of cooperation of companies with public institutions more and more

frequently since many innovative projects require cooperation between business, science and administration. The tendency to bestow trust in public institutions by entities from the commercial sector is an individual feature (some are more trusting, others more suspicious), but it also depends to a large extent on previous experiences with such cooperation. Dependencies, links and interactions between the private and public sector have evolved and become more complicated in the last decade (Castells, 2010; Kareiva, Marvier, 2010). Many authors point to the huge significance of inter-sector cooperation in regional development (e.g. Younès, 2012; Glasbergen, Bierrman and Mol, 2007). In particular high expectations are placed on the public sector, which is currently under constant pressure to perfect its structures in order to provide higher effectiveness, efficiency and quality of services (Kobylińska, Biglieri, p.8). Demands aimed at increasing the innovativeness of the public sector aim to bring its functioning closer towards the principles on which the private sector is based, thus creating more possibilities and areas for cooperation. The purpose of this article is to determine the willingness and level of co-operation between Polish companies and public institutions: both governmental and self-governmental and to identify any barriers that may limit this cooperation. In particular, the factors influencing low level of cooperation between enterprises and public administration institutions in Poland were analyzed.

## 2. THEORETICAL BACKGROUND

Inter-sectoral cooperation is a specific type of inter-organisational relationship. Sectoral differences can have an effect on, for example, decision-making processes, thus entering into such cooperation requires attention to be paid to such differences and finding ways to deal with them in a constructive manner, to conquer barriers and foster commitment to the cross-sectoral approach (Kalegaonkar, Brown, 2000, p.8). The prerequisites for cross-organisational cooperation stem from the differences and complementarities of the basic objectives and structures of the cooperating organisations and can include the following: (see e.g Lank, 2007, p.37)

- more and more emphasised in literature, but also through the media, preferences for actions in the public interest or for the common good;
- operating in the same local environment;
- the existence of a system of personal relations between people.

The internal prerequisites for cooperation can include: (see e.g Lank, 2007, p.37)

- complementary competence of the organization;
- good interpersonal relations with potential partners;
- close location of premises;
- the partners' ability to use good relations with the environment, such as relations with customers, market credibility.

There are four key factors that determine the initiation of such cross-sector cooperation: (Kalegaonkar, Brown, 2000, p.8)

- finding reliable partners in various sectors;
- making a catalog of problems that can be solved jointly;
- eliminating differences to enable a common definition of the problem;
- building relationships between partners.

The initiation of cooperation between entities of different sectors, and even within the same, requires the previous elimination of a group of barriers. According to researchers, these include the following: information barriers, linked to experience, mental barriers, linked to the opinion about the firm, and barriers linked to the way in which the firm is viewed (Jelonek, 2016, pp.

9-24). Other authors classify barriers as belonging to either the public or the private sector (see e.g. Private Sector Interaction, 2006, pp. 76-79). In this way, barriers that can be attributed to the public sector include:

- a lack of commitment and willingness to improve cooperation with the private sector;
- a lack of appropriate indicators and information from the other party confirming, for example, the efficiency and effectiveness of the cooperation;
- a lack of broadly understood "property";
- the internal interdependency of the public sector;
- the complex nature of administrative structures in the public sector;
- time-consuming and compromising decision-making processes.

In turn, the factors that restrict the commitment to cooperation of entities in the private sector are as follows:

- the awareness of the engagement of the public sector in politics;
- conflicts with the firm's business objectives and the possibility of reaching a compromise with the public sector;
- greater authority of the public sector and its participation in shaping decision policies;
- lower technological advancement of the public sector and a gap in quality of services provided by the public sector;
- a possible conflict of interest between the private and public sectors;
- a lack of incentives for long-term commitment to cooperation;
- restricted access to key persons.

Research previously carried out in Poland on barriers to cooperation between the public and private sector indicate that the most commonly occurring restrictions are a result of: a lack of good Polish practices in the realisation of such cooperation, a low awareness and insufficient knowledge on the topic of public-private partnerships, and a lack of qualified personnel to introduce public-private initiatives into the public sector (Public Private Partnerships..., 2011, p. 9). Polish business and public administration representatives point to restrictions and barriers of a systemic, research and communicative nature (Giedrojć, Krzysztozek, 2015, p. 3). Barriers can also have a structural, cultural-awareness or competency-based character (Nowa, Mażewska and Mazurkiewicz, 2011, p.19). As well as the most commonly stated formal restrictions such as: economic barriers (lack of financial resources to realise the desired initiatives, in the case of public partners financial resources are dependent on the state of public finances) and legal barriers (incoherent legal norms - in the case of city councils, there is an overlap of own tasks with commissioned tasks, which often makes cooperation with partners impossible, also bureaucracy), there are also informal barriers, for example socio-cultural barriers (above all the unwillingness of potential partners to engage in cooperation) or barriers linked with gaining knowledge, e.g. the fear of losing one's intellectual property (Jakubowska, Grabowska-Powaga, 2015, pp. 261-262). The little research that has been carried out in Poland shows that 89% of Polish businesses have failed to take advantage of the help offered by local authorities in leading and developing businesses, and only every fourth business owner knew that such help was available. In turn, 43% of representatives of local administrations did not know or could not say what businesses expect from them. Business owners gave a very low rating to local councils' support for businesses. A large majority of them gave this a negative rating (Wasiluk, 2016, p. 85). Other research carried out in Poland also shows that there is still little trust between businesses within a sector, which translates into a low level of cooperation between them (Wasiluk, 2014, pp.297-299; Wasiluk, 2013, pp. 58-62).



If there is a lack of trust between businesses, it comes as no surprise that trust is not freely given to organisations outside the sector either. The specificities of barriers to effective cooperation are, of course, not uniform and regard many different aspects. A clear majority of recommendations for removing these barriers have to do with removing stereotypes, striving for a mutual exchange of information, mutual support, finding solutions and tolerance and respect for the other party. These changes require decisions and determination most of all, that is, factors belonging to the competencies of individual civil servants and business owners. Many positive experiences encourage the removal of barriers to the communication process and a change in attitudes. A key role on the part of business owners should be played by organisations of employers, who have the necessary organisational and substantive base to build long-term relationships and were, indeed, formed with the aim of undertaking such initiatives (Giedroń, Krzysztozek, 2015, p. 20). As indicated previously in this article, the little research carried out in Poland on cross-sectoral cooperation indicates little connection between entities of different sectors. However, not much is known about the mechanisms of the lack of cooperation, which is apparent despite the efforts of politicians, and sometimes in spite of the desires of the higher levels of leadership in business.

In light of the above, the aim of this article is to point out the barriers to initiating cooperation between the private and public sectors in Poland. These factors were identified in empirical studies carried out on businesses in one region of Poland. The author of this article will attempt to analyse the mechanisms which could explain the lack of such partnerships.

### **3. STUDY METHOD**

The aim of this article is to indicate the barriers and factors affecting the level of cooperation between businesses and administrative institutions in Poland. In particular, in the empirical studies aimed to answer the following questions:

- What is the level of cooperation of businesses with institutions of public administration in Poland?
- Do businesses predict an improvement in their level of cooperation with institutions of public administration in the next 2-3 years?
- What factors affect the level of cooperation of businesses with institutions of public administration?
- What are the barriers to the cooperation of businesses with institutions of public administration?
- How can changes in individual factors influence the improvement of cooperation between businesses and institutions of public administration?
- Is there a correlation between the current level of cooperation and the declared willingness to improve it in the next 2-3 years?

The research results presented in this article are based on chosen analyses from wider studies carried out in the Podlaskie voivodeship (Poland) in the years 2014-2015. The research was carried out as part of an international research project (an agreement between the Polish Academy of Research and the National Academy of Research of Belarus (years 2014-2016) (Readiness of enterprises to create cross-border networking). In both cases a questionnaire was sent to the owners or top executives of businesses that qualified for the research. Business representatives (at management level) from Poland also took part in the research. The research sample counted 381 entities.

Table 1: Characteristics of the research sample (own study)

Businesses qualified for the research in the Podlaskie voivodeship		Number of businesses
Researched businesses included:		381
Industry	wood and furniture	81
	Food	83
	metal and machinery	76
	Construction	76
Size of the studied businesses (number of employees)	Up to 9 people	85
	10 – 49 people	146
	50 – 249 people	110
	250 people and more	40
Age of the studied entities (number of years on the market)	Up to 1 year	3
	1 – 3 years	28
	4 – 10 years	67
	More than 10years	283

The studied businesses assessed the level of cooperation with local and central authorities (Likert scale 1-7). In terms of the area of companies' cooperation with public administration institutions (of central and local government) the following variables were assessed: transparency of administration activities, financial and organizational support for entrepreneurship development, cooperation offer prepared by the administration, level of fiscal and organizational barriers to start-up a business, level of corruption, image of administration in society, previous experience of cooperation. Respondents assessed not only how much each factor influences the level of cooperation, but also to what extent the positive changes in the various factors could influence improving the level of cooperation in the future (Likert scale 1-7). The above-mentioned factors determining the level of cooperation between companies and public administration institutions were selected on the basis of critical analysis of the literature and discussions with representatives of business and academic environment. The method of a survey was used for collecting primary information, partial results of which are presented in this article. The following statistical measures were used to interpret the study results: scattering measures – coefficient of variation (V) and measures of central tendency - mean ( $\bar{x}$ ), median (Me), dominant (D), as well as standard deviation (s). Spearman's rank correlations were used for statistical analysis to determine the relationship between the level of companies' trust in the public sector, their cooperation and possibilities for its future strengthening. The analyzes were carried out using the statistical package STATISTICA.

#### 4. RESULTS OF THE RESEARCH

Analysing the results of the research, the low level of cooperation between businesses and institutions of public administration, both at a national and local government level, must be noted. National government institutions in particular were rated as being little trustworthy (2.34 on average) (table). Taking into account the interest of businesses in undertaking cooperation with institutions of public administration in the future, the research results do not show much optimism. While it is true that more organisations rated their willingness to undertake cooperation in the future more highly, these ratings remained very low given the possibilities of the Likert scale (on average 3.75 for local government institutions and 2.92 for national government institutions). The researched businesses were more willing to undertake cooperation with local administrative organisations probably due to their close localisation and greater familiarity with this type of institution as well as an evaluation of the actual effect that this kind of institution can have on the activities of a business. The answers given by businesses correspond to other research carried out in Poland on the levels of trust towards institutions of

public administration in Polish society. Poles tend to see local government as more trustworthy than national government (see e.g Social trust..., 2012). Spearman's rank correlation (table) confirms a high positive correlation. We can therefore state that an increase in the current level of cooperation is accompanied by an increase in the willingness to improve this in the future between the researched businesses and local government institutions.

Table 2: The level of cooperation between the researched businesses and institutions of local and central public administration (own study)

Researched businesses	$\bar{x}$	$M_e$	$D$	$n_D$	$s$	$V$
<b>The level of cooperation between the researched businesses and institutions of local administration</b>						
Researched businesses in total	3,30	3	4	91	1,53	46,23
<b>The level of cooperation between the researched businesses and institutions of central administration</b>						
Researched businesses in total	2,34	2	1	153	1,48	63,2
The degree of interest in <b>improving cooperation</b> in the next 2-3 years						
a) central government institutions (C)	2,92	3	1	101	1,66	56,93
a) local government institutions (L)	3,75	4	4	91	1,75	46,77
<b>Spearman's rank correlations:</b>	(p < 0.0500)					
<b>Assessment of the current level of cooperation and possibilities of improving it in future</b> a) central government b) local government	0,637799 0,614716					

Taking into account the individual factors influencing the willingness to establish cross-sectoral cooperation (selected on the basis of literature and previous empirical research), the following should be noted: transparency of administration activities, financial and organizational support for entrepreneurship development, cooperation offer prepared by administration, level of organizational and fiscal barriers, level of corruption, previous experience of cooperation.

According to the data presented in the table below, businesses that rated more highly the level of their cooperation with public institutions rated better their willingness to improve it in the future.

*Table 3: Assessment of the influence of individual factors on the current cooperation between businesses and central (C) or local (L) government institutions (own study) – Table ends on the next page*

Statistics	$\bar{x}$	$M_e$	$D$	$n_D$	$s$	$V$
<i>Factor: Transparency of administration activities</i>						
Central (C)	3,09	3	1	105	1,82	59,13
Local (L)	3,45	3	1	75	1,85	53,56
Positive change in the factor:						
Central (C)	4,09	4	6	64	1,92	46,95
Local (L)	4,25	4	7	67	1,98	46,61
Spearman's rank correlation						
a) Central Government Institutions (CGI)				0,548909		
b) Local Government Institutions (LGI)				0,645694		
<i>Factor: Financial and organizational support for entrepreneurship development</i>						
Factor:						
C	3,33	3	1	84	1,8	54
L	3,54	4	4	78	1,78	50,2
Positive change in the factor:						
C	4,49	5	6	1,93	1,93	43
L	4,53	5	7	1,96	1,96	43,3
Spearman's rank correlation						
c) CGI				0,485004		
d) LGI				0,467123		
<i>Factor: Cooperation offer ready-prepared by administration</i>						
Factor:						
C	2,99	3	1	116	1,82	60,72
L	3,36	3	3	75	1,74	51,6
Positive change in the factor:						
C	4,25	4	5	72	1,91	45,05
L	4,33	5	5	83	1,85	42,8
Spearman's rank correlation						
a) CGI				0,488014		
b) LGI				0,431559		
<i>Factor: Level of fiscal and organizational barriers to start up a business</i>						
Factor:						
C	3,43	3	1	83	1,89	54,97
L	3,64	4	3	81	1,78	48,97
Positive change in the factor:						
C	4,31	4	6	72	1,93	44,8
L	4,33	4	6	67	1,91	44,2
Spearman's rank correlation						
c) CGI				0,472492		
d) LGI				0,492570		
<i>Factor: Corruption level</i>						

Factor:						
C	3,02	3	1	140	2,03	67,07
L	3,18	3	1	124	2,05	64,51
Positive change in the factor:						
C	3,58	4	1	110	2,11	59
L	3,63	4	1	101	2,13	58,5
Spearman's rank correlation						
a) CGI				0,554662		
b) LGI				0,667430		
	<i>Factor: The image of administration in society</i>					
Factor:						
C	3,02	3	1	99	1,73	57,68
L	3,4	3	3	81	1,77	52,2
Positive change in the factor:						
C	3,76	4	3	76	1,85	49,12
L	3,94	4	3	67	1,89	47,8
Spearman's rank correlation						
a) CGI				0,503114		
b) LGI				0,603516		
	<i>Factor: Previous experience of cooperation</i>					
Factor:						
C	3,08	3	3	104	1,78	57,6
L	2,79	3	1	83	2,12	76
Positive change in the factor:						
C	3,51	3	1	83	1,92	54,7
L	3,01	3	0	33	2,28	75,9
Spearman's rank correlation						
a) CGI				0,615676		
b) LGI				0,801950		

Among the factors affecting the current cooperation between businesses and public institutions, the lowest ratings were given to: a ready-prepared offer of cooperation from national government institutions (average rating - 2.99), the image of administration in Polish society (3.02), and previous experiences of cooperation with national government institutions (2.79). In the opinion of businesses, cooperation with local government institutions was rated slightly more highly. In light of these ratings, the least highly rated factors can be treated as key barriers to undertaking cross-sectoral cooperation in Poland and it is these that must be offset first in order to improve the environment for cross-sectoral cooperation. Actions taken on both sides will be undoubtedly important: not only the administrative institution, which must play a greater role as the leader in laying the groundwork for possible cooperation, but also the public image of governmental institutions be changed to one which is more friendly towards businesses. On the other hand, businesses in Poland must break the stereotypes of the lack of sense of common initiatives, great effort and a low bargaining position in negotiations with institutions of the public sector. In turn, respondents deem that an improvement in financial and organisational support for businesses from local government institutions could improve cross-sectoral cooperation to the greatest extent (average rating - 4.53). Similarly to a low fiscal barrier (4.33), and a ready-made offer of cooperation from public institutions (4.33), this could strengthen cooperation between entities. An assessment of the effect of individual factors on the current level of cooperation and the possibility of it being strengthened in the future as a result of positive changes showed a high correlation in the case of variables such as: the transparency of actions taken by (local) administrations, the image of local administration in society, lowering corruption levels (in the case of local administrations), and previous experiences of cooperation.

Therefore it can be stated that an increase in the rating of current cooperation is accompanied by an increase in the average ratings regarding the willingness to strengthen it in the future. This concerns respondents' ratings of local administrations, with whom they have more opportunities to cooperate and who have a higher tendency to cooperate than institutions at a higher level.

## 5. CONCLUSION

Cross-sectoral cooperation creates huge opportunities for the development of local businesses, an improvement in the working conditions of locals and local societies, and generally has a positive effect on trust between the two parties. This kind of partnership can build organisations and their institutional ability to make innovative changes that are sustainable on a large scale. There is no doubt that the initiation of such cooperation requires considerable resources - time, energy, funds and skills. The management of such relationships also requires considerable effort in creating a common vision for development and the creation of multi-sectoral social capital, which promotes new, local possibilities of joint ventures. This article pointed out the barriers and possibilities for development of cooperation between businesses and institutions of the public sector using Poland as an example. After diagnosing the situation in this area it was concluded that cooperation between businesses and institutions of the public sector is at a very low level. As the results of the research show, there are many barriers which restrict the initiation of cooperation between entities. Above all, low levels of trust of businesses towards the public sector restrict the possibilities of creating mutual relationships. The lack of transparent information regarding possible areas for cooperation and a high fiscal and financial burden do not encourage the creation of such relationships. It is certain that institutions of public administration in Poland should take large-scale actions aimed at improving their public image in society, but these should be accompanied by a change in the mentality of civil servants. Public condemnation of corruption and stricter punishments for civil servants caught taking bribes could no doubt improve the perception of the transparency of the work of institutions of public administration. A definite recommendation would also be to open good practice databases regarding the cooperation of businesses with institutions of public administration on a national and local government level, as well as making this information available in the form of seminars and conferences dedicated to business owners.

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## COOPERATION OF BUSINESSES WITH BUSINESS ENVIRONMENT INSTITUTIONS (USING POLISH AND BELORUSSIAN BUSINESSES AS A CASE STUDY)

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### **ABSTRACT**

*Research background: Modern businesses are faced with increasingly difficult and complicated conditions for development, while existing circumstances force them to cooperate on many levels, including with business environment institutions. Literary studies and national and regional research on cooperation (especially cooperation with business environment institutions) are meagre, which is why this article aims to fill the gap regarding cooperation on a regional level.*

*Purpose of the article: The aim of this article is to identify the level of cooperation of business with business environment institutions in chosen business sectors in Poland and Belarus and the possibilities of strengthening this cooperation in the near future.*

*The research problem was answered through posing the following questions: which factors affect the level of cooperation with business environment institutions? How do respondents rate the current level of cooperation with business environment institutions? To what degree do individual factors affect the current level of cooperation of businesses with business environment institutions? What is the level of interest of the researched firms in strengthening cooperation with business environment institutions? To what extent could positive changes in individual factors lead to an improvement in the cooperation of businesses with business environment institutions in the near future?*

*Data and Methods: The research encompassed over 500 businesses. The data was interpreted with the use of tables, descriptive statistics and nonparametric statistics.*

*Results and conclusions: The research carried out indicated both a low level of current cooperation of businesses with business environment institutions (a mean average of 3.07 (on a scale of 1-7)) and an average level of interest in strengthening this in the future (3.69).*

**Keywords:** *business, business environment institutions, cooperation, region*

### **1. INTRODUCTION**

The concept of cooperation is commonly used in social life and it can be used in different contexts and areas of economic life (Głabicka-Auleytner, 2013, pp. 115-126). Under conditions of intense competition organizations recognize the need for cooperation on different levels (Powell, 1990, pp. 295-336; Noteboom, 1999; Powell et al., pp. 116-145, 1996; Świadek, Wiśniewska, 2015) not only on the level of competition (Turek, 2015, pp. 212-221). The trust in the cooperation party remains the key issue in establishing cooperation - business people often fail to trust others and do not cooperate because of the fear of losing technology, customers, or market position. In addition, companies often have internal problems that contribute to limiting or preventing cooperation and joint investment (Study on businesses and business environment institutions, 2012, p.7). This may be the reason for the following considerations: what is the role of potential cooperation animators - business environment institutions that should help to build business-to-business relationships and whether businesses consider collaborating with BEI in terms of opportunities for development and enhancing their own competitiveness, which should be particularly important in areas insufficiently financially invested, which include both Podlaskie voivodeship in the north-eastern Poland and neighboring area of Belarus. Therefore, this article attempts to investigate whether the



businesses established in the above mentioned areas are aware of the benefits of cooperation with business environment institutions. The aim of this article is to identify the level of cooperation with BEI by Polish and Belarusian businesses and the possibilities of strengthening it in the near future.

## 2. LITERATURE REVIEW

Despite common understanding of the concept of cooperation its Interpretation varies (Karwacka, 2016; Daniluk, Tomaszuk, 2016), which is noticeable among others in the multitude of terms used to describe it (Pierścieniak, 2015, Gnyawali, Madhavan, 2006, pp. 507-509; Czarniawski, 2002; Strzyżewska, 2011; Połomska-Jasieniowska, 2010). Irrespective of the adopted definition, in complex economic reality, cooperation besides competition is a prerequisite for functioning (Wasiluk, 2013) and strengthening the potential on the various arenas (Hamel, 1991, pp. 83-104; Håkansson, 1987; Inkpen, Crossan, 1996, pp. 596-618) and it should be mutually beneficial for all parties involved with defined mutual benefits, objectives, responsibilities and sharing of resources or benefits (Mattessich, Murray-Close, Monsey, 2001, p.7). Besides cooperation between businesses (Karwacka, 2016, Wasiluk, 2016: Wasiluk, 2017, pp. 755-762) in the modern global economy there is also dynamic development of various forms of cooperation between economic entities (Wybieralski, 2015; Tomski, 2008; Strzyżewska, 2011). Therefore it is difficult to identify the principles of best cooperation and the optimum way of structuring it usually occurs in a single configuration of the characteristics that apply in a particular case (Williamson, 1991, pp. 75-94; Madhok, 1995, pp. 57-74; Mayer, Argyres, 2004, pp. 394-410; Madhok, 2006, pp. 4-11), That is due to differences in the specific nature of the organizations involved in the cooperation (Samson, 2007, p. 364; Sarkal et al., 2009, pp. 583-600). One of the areas of cooperation is the cooperation of businesses with business environment institutions, which can include (Filipiak, Ruszała, 2009, pp. 7-8; Piasecki et al., 2001, pp.175-176):

- national administration entities;
- national government entities;
- public-private partnerships;
- R&D facilities;
- employers and employees organizations;
- chambers and associations of producers;
- training and consulting institutions;
- higher education sector;
- institutions that support entrepreneurship;
- networks that support entrepreneurship and innovation.

They offer support in particular in the area of improvements in company management, establishing contacts, organizational, technical and technological development, information and advisory activities, development of retail and franchise networks, provision and support in acquiring financial aid and improvements in competitiveness through the absorption and implementation of new technologies.

## 3. METHODOLOGY OF RESEARCH

The research part of this article presents partial results of the international research project "Enterprise Readiness for Cross-border Networking" carried out as a result of an agreement between the Polish Academy of Sciences and the Belarusian State Academy of Sciences in the years 2014-2016. The research covered managers of Polish businesses (located in Podlaskie voivodeship - 381 enterprises) and Belarusian (121 enterprises). The desk research carried out at the preliminary stage of the study (e.g. Romanowska, 1997; Ford, Håkansson, 2013, pp.

1017-1024; Strzyżewska, 2011; Górzyński, 2006; Daszkiewicz, 2007; Czakon, 2007; Bengtsson, Kock, 2014, pp.180-188; Skalik, 2002) and discussions with experts of the academic and business environment have allowed for separation of six areas of cooperation:

- between businesses within the industry,
- between competing businesses,
- between businesses and business environment institutions,
- between businesses and scientific research sector,
- between businesses and local authorities,
- between businesses and national authorities.

Subsequently, several factors influencing the level of cooperation were identified within each of the areas. In the area of business cooperation with business environment institutions, a list of 9 factors was identified:

- possibility of carrying out common research and development initiatives,
- access to research institutions/research infrastructure,
- access to financial institutions and support programs,
- business consulting and advice,
- commercialization of results of the research,
- access to databases,
- assistance in business expansion,
- assistance in the transfer of technology,
- previous experience of cooperation.

Respondents were asked to assess the level of cooperation in each of the analyzed areas and indicate how each factor influenced the level of cooperation in the analysed area (1-7 scale). Respondents then identified the degree of their interest in strengthening cooperation in the near future (2-3 years) and indicated to what extent the positive changes in the individual factors could influence the level of cooperation (1-7 scale also). The aim of this article is to identify the level of cooperation between Polish and Belarusian businesses with business environment institutions and the prospects for strengthening it in the near future. The research problem was answered through posing the following research questions: How do respondents rate the current level of cooperation with business environment institutions? To what degree do individual factors affect the current level of cooperation of businesses with business environment institutions? What is the level of interest of the researched firms in strengthening cooperation with business environment institutions in the near future? To what extent could positive changes in individual factors lead to an improvement of cooperation with business environment institutions in the near future? Tabular forms of data presentation were used to interpret the data, which allowed for determining how are the individual categories distributed in the research sample; descriptive statistics that determine the relation between an individual variant of the answer and all the answers; and nonparametric statistics that allowed for validation of significant differences in responses. The analyses were carried out using a statistical package statistica.

#### **4. ANALYSIS OF RESEARCH RESULTS**

Table 1 illustrates an analysis of cooperation in specific aspects. After analysing the results one can notice that in general, Belorussian respondents are more open to cooperation in all of its aspects - the mean level of cooperation is higher in all areas, this is also confirmed by an analysis of the mode average (the same level was declared only in the case of cooperation with local authorities - 4) and median (which coincides in the case of cooperation of competing firms

within the same sector, in the remaining cases higher indications were given by Belorussian respondents). The largest disproportions in ratings appear in the area of cooperation of firms with national authorities (a mean average difference of 1.44), with business environment institutions (1.14) and with the scientific research sector (1.13). In the remaining three cases the differences in answers given is smaller and does not exceed one point. The cooperation of businesses with business environment institutions was rated lowly by Polish respondents, which is reflected in the mean (3.07), median and mode (3) averages. However, on comparing the mean average (as the most differential average) of cooperation in all areas it can be noticed that only cooperation between firms in the sector and with local authorities was rated more highly (3.94 and 3.30 respectively). The results obtained in all areas can be classed a low - none of them reached the average level (on the scale of 1-7 used this was set at 4). This could be a result of a low need for cooperation in general and a lack of awareness of the advantages of cooperation in many areas. Belorussian business representatives declared a mean level of cooperation of between 3.23 - 4.38, cooperation with business environment institutions was rated relatively highly (mean of 4.21; median and mode 4) - only cooperation between businesses in the same sector was rated more highly (4.38). On analysing the coefficient of variation it can be noticed that this is lower for Belorussian respondents in all areas of cooperation, cooperation of firms with business environment institutions is characterised by an average (49.88% in the case of Polish businesses) and low (38.4% in the case of Belorussian businesses) rating.

*Table 1: The level of current cooperation (in Polish and Belarussian respondents' opinion)  
 (author's research results)*

Level of cooperation	Country	x	M	D	nD	V
cooperation between businesses within the industry	Poland	3,94	4	4	90	40,29
	Belarus	4,38	4	5	34	36,01
cooperation between competing businesses	Poland	2,80	3	2	94	51,90
	Belarus	3,23	3	3	41	44,98
cooperation with business environment institutions	Poland	3,07	3	3	93	49,88
	Belarus	4,21	4	4	31	38,40
cooperation of businesses with scientific research sector	Poland	2,51	2	1	134	62,05
	Belarus	3,64	3	3	34	44,63
cooperation of businesses with national authorities	Poland	2,34	2	1	153	63,21
	Belarus	3,78	4	4	31	49,94
cooperation of businesses with local authorities	Poland	3,30	3	4	91	46,23
	Belarus	4,07	4	4	24	47,76

Following this, the level of influence of specified factors on the current level of cooperation with business environment institutions was analysed (table 2). All factors with the exception of access to financial institutions and support programs (this factor had the biggest influence according to Polish respondents - 3.73) were rated more highly by Belorussian respondents. The low rating of this factor could be a result of the lack of real possibilities of taking advantage

of financial support in Belarus. Polish respondents gave the lowest rating to the possibility of the commercialisation of results of the research (a mean average of 2.86), followed by: the possibility of carrying out common research and development initiatives (3.01); access to research institutions and infrastructure (3.04); access to databases (3.14); previous experiences of cooperation (3.27); assistance in the transfer of technology (3.40); business consultations and advice (3.5) and assistance in business expansion (3.58). With regard to all factors, the median was 3 or 4, however the fact that in the majority of analysed factors (the possibility of carrying out common research and development initiatives, access to research institutions and infrastructure, business consultations and advice, the commercialisation of research results, access to databases and assistance in the transfer of technology) the most common rating given by Polish respondents was the lowest rating - "a complete lack of influence" - is rather unsettling. These results fit the image of Polish businesses - research on innovation shows that Polish firms have little interest in research and development initiatives (Baczko 2012, Polska Agencja Rozwoju Przedsiębiorczości (Polish Agency for Business Development 2015), and expenses meant for innovation were used for the purchase of machines and appliances rather than for conducting research and development (Bromski, 2013). In the case of Belorussian businesses, we can notice a somewhat greater influence of individual factors on the current level of cooperation between businesses and business environment institutions. As was the case with Polish respondents, the lowest rating was given to the possibility of commercialisation of research results (3.48), followed by: access to financial institutions and support (3.7) - the only factor rated more highly among Polish respondents; the possibility of carrying out common research and development initiatives and access to research institutions and infrastructure (both with a mean average of 3.75). The remaining factors were rated higher than average (4 on a scale of 1-7), in order: access to databases (4.05); previous experiences of cooperation (4.11); assistance in the transfer of technology (4.16); assistance in business expansion (4.17) and business consultations and advice (4.46). Median averages were usually the same or higher in relation to Polish businesses (a bigger difference was noted only in the case of business consultations and advice), however big differences can be observed when analysing the mode averages - the greatest variations appear when responses to the questions about assistance in the transfer of technology and business consultations and advice are compared. The coefficient of variation with regard to all factors is at an average level (40-60%), however we can simultaneously notice lower variations in the responses of Belorussian businesses.

*Table following on the next page*

Table 2: The influence of specified factors on the current level of businesses cooperation with business environment institutions (author's research results)

Factor	Country	X	M	D	nD	V
carrying out common research and development initiatives	Poland	3,01	3	1	99	57,41
	Belarus	3,75	4	4	32	47,71
access to research institutions/infrastructure	Poland	3,04	3	1	102	57,44
	Belarus	3,75	4	4	32	47,71
access to financial institutions and support programs	Poland	3,73	4	3	71	49,03
	Belarus	3,70	3	3	27	51,91
business consultations and advice	Poland	3,5	3	1	71	50,73
	Belarus	4,46	5	4, 6	22	41,32
commercialisation of results of the research	Poland	2,86	3	1	104	55,95
	Belarus	3,48	3	1	24	53,14
access to databases	Poland	3,14	3	1	89	55,01
	Belarus	4,05	4	3	21	48,86
assistance in business expansion	Poland	3,58	4	3	81	49,82
	Belarus	4,17	4	2, 4, 5	20	46,16
assistance in the transfer of technology	Poland	3,40	3	1	79	53,07
	Belarus	4,16	4	6	22	48,21
previous experiences of cooperation	Poland	3,27	3	1, 3	76	51,69
	Belarus	4,11	4	3	21	47,75

Considering these results, it seems interesting to research the level of interest in cooperation with business environment institutions in the near future (table 3). Similarly to the analysis of the current level of cooperation, all aspects of cooperation researched through the prism of the level of interest of the researched firms in their development were rated more highly by Belorussian respondents. The differences in opinion vary from 0.28 (for the level of interest in closer cooperation with local authorities) to 1.19 (for the level of interest in closer cooperation within the sector). In the case of the level of interest in closer cooperation with business environment institutions the difference was 0.6. In both cases, optimism regarding the interest in strengthening cooperation with business environment institutions is quite high (in comparison to other factors) - only the level of interest in strengthening cooperation with local authorities (in the case of Polish businesses) and with businesses within the sector (in the case of Belorussian businesses) were rated more highly. When comparing the current level of cooperation in individual aspects with the level of interest in its strengthening, however, we can notice a moderate level of interest in most aspects. Belorussian businesses are not even interested in maintaining their current level of cooperation with local authorities (-0.04), while Polish businesses declare a decrease in interest in cooperation between businesses within the same sector (-0.32). It can be seen as optimistic that the dominant response factor rose significantly - especially for Polish businesses - only in the case of the level of interest in

strengthening cooperation with national authorities did it remain at the level of “total lack of interest”, in the remaining cases the indication is higher (at least 3). The variation factor, similarly to the rating of the current level of cooperation in each area is lower on the Belorussian side, and does not exceed the average level.

*Table 3. The level of the studied businesses' interest in closer cooperation in the near future (author's research results)*

Level of cooperation	Country	X	M	D	nD	V
cooperation between businesses in the industry	Poland	3,62	4	4	98	41,89
	Belarus	4,81	5	5	33	33,45
cooperation between competing businesses	Poland	3,01	3	3	93	50,20
	Belarus	3,95	4	5	28	37,47
cooperation with business environment institutions	Poland	3,69	4	4	84	43,49
	Belarus	4,29	4	4	39	35,79
cooperation of businesses with scientific research sector	Poland	3,20	3	3	88	52,00
	Belarus	3,99	4	4	46	37,92
cooperation of businesses with national authorities	Poland	2,92	3	1	101	56,92
	Belarus	3,79	4	4	27	51,94
cooperation of businesses with local authorities	Poland	3,75	4	4	91	46,76
	Belarus	4,03	4	4	31	46,49

The respondents were also asked to what degree positive changes in individual factors could cause an improvement in the cooperation between businesses and business environment institutions (table 4). The declared effect of positive changes on the improvement of cooperation between businesses and business environment institutions with regard to most factors (with the exceptions of the possibility of undertaking common research and development initiatives and access to financial institutions and support) is higher for Belorussian respondents. This could be due to the fact that the effect of individual factors on the current level of cooperation was also rated higher by Belorussian businesses. However, analysing changes in opinion between the the effect of positive changes in individual factors on the current level of cooperation, a more optimistic pattern can be observed among Polish businesses - differences according to the mean average are higher in each analysed factor and vary between 0.32 for previous experiences of cooperation to 0.69 for the possibility of undertaking common research and development initiatives. Median and mode averages are also respectively higher. Nevertheless, in the case of Belorussian firms in regard to two factors (the possibility of undertaking common research and development initiatives and business consultations/advice) the effect of positive changes in individual factors reached a lower level than the current level of cooperation. In the case of the remaining factors, there is a positive difference that ranges from 0.18 for access to research centres and infrastructure to 0.5 for the commercialisation of research results. Analysing the level of variation of the responses it can be observed (similarly to previous variables) that in the majority of analysed factors this is lower for Belorussian respondents, and does not come close to exceeding the average level.

*Table 4. Influence of positive changes in individual factors on an improvement in the cooperation between businesses and business environment institutions cooperation in the near future  
 (author's research results)*

Factor	Country	X	M	D	nD	V
carrying out common research and development initiatives	Poland	3,70	4	4	68	49,74
	Belarus	3,69	3	2	26	51,12
access to research institutions/infrastructure	Poland	3,69	4	4	77	48,02
	Belarus	3,93	4	5	25	44,63
access to financial institutions and support programs	Poland	4,26	4	4	73	42,24
	Belarus	3,94	4	3, 5	21	46,92
business consultations and advice	Poland	3,99	4	4	84	43,13
	Belarus	4,45	4	4	29	39,74
commercialisation of results of the research	Poland	3,40	3	4	83	50,39
	Belarus	3,98	4	5	26	46,85
access to databases	Poland	3,65	4	3	79	48,81
	Belarus	4,43	5	6	27	40,89
assistance in business expansion	Poland	4,19	4	4	77	41,86
	Belarus	4,51	5	5, 7	22	40,67
assistance in the transfer of technology	Poland	3,99	4	4	82	44,00
	Belarus	4,55	5	6	28	40,86
previous experiences of cooperation	Poland	3,59	4	4	77	48,75
	Belarus	4,37	4	7	23	43,91

Links between the current level of cooperation between businesses and business environment institutions and the interest in strengthening this (using Spearman's rank correlation) were also analysed. In responses of representatives from both countries, a high positive correlation was observed. A higher rating of the current level of contact with business environment institutions translates to a greater readiness for cooperation in the future. However, analysing the links between the effect of factors on current cooperation and ratings regarding positive changes in individual factors on its improvement in the future, we can also observe a significant dependency in all responses, with stronger links noted on the Belorussian side. An increase in the ratings regarding individual factors affecting the current level of cooperation between businesses and business environment institutions is accompanied by an increase in the average rating of the effect of positive changes in these factors on engaging in cooperation in the future.

Table 5: Correlations of Spearman's ranks for evaluation of the current level of cooperation and possibilities of its strengthening in the future (author's research results)

	Poland	Belarus
evaluation of the current level of cooperation between businesses and business environment institutions and possibilities of its strengthening in the future	0,644566	0,624693
factors		
possibility of carrying out common research and development initiatives	0,722554	0,812434
access to research institutions/infrastructure	0,690034	0,758946
access to financial institutions and support programs	0,681550	0,709136
business consultations and advice	0,664423	0,721894
commercialisation of results of the research	0,689117	0,798248
access to databases	0,664884	0,762540
assistance in business expansion	0,660377	0,754199
assistance in the transfer of technology	0,681178	0,792076
previous experiences of cooperation	0,760901	0,801438

## 5. CONCLUSION

This article touched on the topic of cooperation between businesses and business environment institutions. The research carried out shows that in the research group, a moderate interest in cooperation with business environment institutions can be observed, which is higher in the case of Belorussian businesses. The higher ratings given to most factors in the case of Belorussian firms can be explained by the somewhat higher psychological readiness of Belorussians to engage in cooperation in general – Poles are a people with a deeply rooted tradition of individualism. Among the researched businesses, there is a definite lack of positive reflections regarding the advantages of various forms of cooperation, including cooperation with business environment institutions. It should also be pointed out that cooperation with business environment institutions has a particularly large effect on small businesses which often, after reaching a certain point in their development, are unable to independently carry out research and development initiatives, modernise their technology etc. For this reason, a key role can be attributed to the persuasion and encouragement of business owners to engage in this kind of cooperation. Diagnosing those areas in which assistance from business environment institutions could be truly necessary would be helpful.

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## LOCAL PORTFOLIO CHOICES OF TURKISH INDIVIDUAL INVESTORS

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### **ABSTRACT**

*Although the advantages of diversification are emphasized by traditional finance theories, individual investors often tend to hold only a few domestic stocks in their portfolios. This phenomenon has been subject to research since the last two decades under the title of home bias. The preference for investing close to home also applies to portfolios of domestic stocks. In other words, asymmetric information between local and nonlocal investors may drive the preference for geographically proximate investments and this phenomenon is called local bias in the terminology of behavioral finance. This study provides new evidence concerning local bias of individual investors in an emerging country's stock market namely, Borsa Istanbul (BIST). More specifically, this study investigates whether individual investors weigh shares of firms, which are geographically close to themselves, more than expected in their portfolios. The results of the analyses indicate that Turkish individual investors are prone to local bias on the average. Furthermore, the findings suggest that the reason for their tendency to invest in local stocks is not informational advantage.*

**Keywords:** *behavioral finance, home bias, individual investors, investments, local bias*

### **1. INTRODUCTION**

Although the diversification is one of the most fundamental concepts in investment theory, the non-diversification is one of the big puzzles of international finance. More specifically, despite the advantages of diversification are emphasized by traditional finance theories; in practice, individual investors often tend to hold only a few domestic stocks in their portfolios. In other words, most of the investors have tendency to overweight domestic equities and underweight international equities (French and Poterba, 1991). This phenomenon has been subject to research since the last two decades under the title of home bias. The preference for investing close to home also applies to portfolios of domestic stocks and this phenomenon is called local bias in the terminology of behavioral finance. The pioneering study of Coval and Moskowitz (1999) on U.S. investment managers suggests that asymmetric information between local and non-local investors may drive the preference for geographically proximate investments. Whereas many other studies provide supporting evidence for information asymmetry (e.g. Ivkovic and Weisbenner, 2005; Massa and Simonov, 2006), another group of studies argue that local bias does not generate excessive returns and the reason for the existence of local bias is mostly behavioral, e.g. familiarity (e.g. Zhu, 2002; Pirinsky and Wang, 2006; Seasholes and Zhu, 2010). Within this framework, our study provides new evidence concerning local bias of individual investors in an emerging country's equity market namely, Borsa Istanbul (BIST). More specifically, in this study we investigate, firstly, whether individual investors weigh shares of firms, which are geographically close to themselves, more than expected in their portfolios. As expected, the results indicate that Turkish individual investors are prone to local bias on the average. Then, we analyze whether investors gain more from their local equity investments, in order to probe the reasons of local bias. If returns of local investments are

significantly higher than non-local ones, it can be claimed that the local bias is related to the accessibility to advantageous information, otherwise, local bias is thought to be due to behavioral biases such as, familiarity. Our findings suggest that the reason for their tendency to invest in local equities is not informational advantage. To the best of our knowledge, this study is the first to investigate the existence of local bias at Borsa Istanbul equity market. The major contribution of this study is the use of a very comprehensive data set on individual investors. In the literature, there is relatively limited number of studies focusing on individual investor-level data due to data constraints, i.e., difficulty to reach individual investor-level databases. In general, studies utilizing individual investors' data around the world obtain data from a single brokerage firm; hence their samples are limited to the clients of that firm. We obtain our data from the Central Registry Agency of Turkey (CRAT) rather than a single brokerage firm. Hence our sample is drawn from the whole population in the country and does not have any bias towards any sub-group. The data is also very reliable due to the fact that equities traded in Borsa Istanbul is fully dematerialized at CRAT and therefore the data reflects the official records of the investors' portfolios. Thereby, we expand the research on local bias to a new and important market, which is one of the most active markets in terms of turnover. The rest of the article is organized as follows. The relevant literature is presented in the next section. Then, the structure of data set is summarized and the methodology of the analysis is presented. Thereafter, the results of the analysis are explained. Finally, we summarize, make suggestions for further research and conclude the article.

## 2. LITERATURE REVIEW

### 2.1. Definition of local bias and its measurement

The measurement of *local bias* differs depending on the definition of *local investment* accepted by the researcher. The different *local investment* definitions found in the literature survey can be categorized in three groups: *Local investment* is (1) defined as a pre-specified distance (like 100 km., 250 miles, etc.) (2) defined as a computed distance, (3) defined as a specific city or region. The *local bias* is measured after defining *local investment*. The studies for each category are listed in table 1.

Table 1: Definition / measurement of "local investment"

<i>Pre-specified distance</i>		<i>City or region</i>		<i>Computed distance</i>
Coval and Moskowitz (2001)	100 km	Grinblatt and Keloharju (2001)	municipalities of Finland	Coval and Moskowitz (1999)
Hau (2001)	100 km	Loughran and Schultz (2004)	U.S. cities	Zhu (2002)
Ivkovic and Weisbenner (2005)	250 miles	Pirinsky and Wang (2006)	U.S. MSAs	Dorn and Huberman (2005)
Gaspar and Massa (2007)	100 km	Feng and Seasholes (2008)	Chinese cities	Massa and Simonov (2006)
Ivković, Sialm Weisbenner (2008)	50 miles	Kedia and Zhou (2011)	U.S. MSAs	Dorn, Huberman and Sengmueller (2008)
Goetzmann and Kumar (2008)	250 miles	Das (2011)	U.S. MSAs	Bodnaruk (2009)
Seasholes and Zhu (2010)	250 miles	Nofsinger and Varma (2012)	U.S. states	Cumming and Dai (2010)
Chhaochharia, Kumar and Niessen-Ruenzi (2012)	250 miles	Jacobs and Weber (2012)	German cities	
Baltzer, Stolper and Walter (2015)	100 km			

## 2.2. Review of empirical studies on local bias

Coval and Moskowitz's (1999) study can be considered as pioneering in this field. Their findings indicate that U.S. investment managers exhibit a strong preference for locally headquartered, particularly small and highly levered firms which produce nontraded goods. In their next study, Coval and Moskowitz find that despite the gains that can be generated from local investments, an average U.S. mutual fund exhibits only a modest bias toward local stocks. They also find that funds, which have a strong focus on local assets, exhibit even greater local performance and, the extent to which a firm is held by nearby investors is positively related to its future expected return. In another study, Huberman (2001) find that the shareholders of a Regional Bell Operating Company (RBOC) tend to live in the area which it serves. The same year, Grinblatt and Keloharju (2001) analyze Finnish investors for the period from December 1994 through January 1997 and their results indicate that Finnish investors tend to invest not only in nearby firms, but also exhibit preference for same-language and same-culture firms. For the period January 1991 – November 1996, Zhu (2002) uses a sample of 27189 U.S. individual investors and finds that individual investors tend to invest in companies closer to them. For the same period and by using data on the investments of individual investors in U.S., Ivkovic and Weisbenner (2005) show that households strongly prefer local investments.

The findings of Hong, Kubik, and Stein (2008) provide evidence for the local bias of investors in U.S., for the period 1970-2005. The authors find that, share prices of spatially close firms increase with the excess demand of nearby residents, in the presence of only few local firms competing for investors' money. In their study investigating whether investors in U.S. have value-relevant information about local stocks, Seasholes and Zhu (2010) find that investors tilt their portfolios towards local stocks. The study of Cumming and Dai (2010) differs from previous studies by using a different sample type. They investigate local bias in the context of U.S. venture capital investments for the period 1980 – June 2009 and they find that venture capitals exhibit strong local bias in their investment decisions. They also find that more reputable venture capitals (older, larger, more experienced, and with stronger IPO track record) and those with broader networks exhibit less local bias. There are also studies that provide evidence for local bias in the countries other than U.S. For instance, Massa and Simonov (2006) investigate whether Swedish investors use their investment in financial assets to hedge their nonfinancial income. Their findings are for the period 1995-2000, and provide evidence for the fact that investors do not engage in hedging, but tend to concentrate their holdings in stocks to which they are geographically or professionally close or that they have held for a long period. Bodnaruk (2009) finds that after moving, Swedish investors abnormally increase their ownership in companies closer to their new location and these new investments provide them with higher risk-adjusted returns than companies in which they kept holdings unchanged or abnormally reduced holdings.

Another study focusing on a country other than U.S. belongs to Jacobs and Weber (2012). They provide evidence that local bias at the individual level materially affects stock turnover at the firm level in Germany, for the period between June 1988 and January 2009. Among very few studies on emerging countries, Feng and Seasholes (2008) carry out an analysis on a data set provided by a national brokerage firm from the People's Republic of China. Their results indicate that, over the period from January 1999 to December 2000, individual investors tend to invest a high portion of their portfolios locally. More specifically, both men and women overweight local stocks by 9% relative to the market portfolio. In Chinese stock market, for the period January 2003 through June 2009, Liao et.al. (2012) also reach similar results suggesting that retail investors display a strong tendency to invest in stocks listed at the stock exchange that is geographically close to them in China.

### 2.3. Possible reasons of local bias

Aabo, Pantzalis and Sorensen (2013) state that, though the local bias within and between countries is well established in the empirical literature, the underlying reasons are more ambiguous. Two different views exist in the literature (Table 2).

*Table 2: Possible reasons of local bias*

Informational advantage	Behavioral bias (e.g. familiarity)
Coval and Moskowitz (2001)	Zhu (2002)
Hau (2001)	Pirinsky and Wang (2006)
Ivkovic´ and Weisbenner (2005)	Seasholes and Zhu (2010)
Massa and Simonov (2006)	Liao et al. (2012)
Ivković, Sialm and Weisbenner (2008)	Baltzer, Stolper and Walter (2015)
Bae, Stulz and Tan (2008)	
Bodnaruk (2009)	

The first view suggests that investors may have informational advantage due to their closeness to the companies, while the second assumes the existence of a behavioral bias, e.g. familiarity. Those who defend the second view argue that investors may not have any valuable information; instead, they may rely on their familiarity with these stocks or on another behavioral bias. The classical approach to determine the possible reason of local bias is to compare the return performances of local and non-local investments. If the investors earn money from their local investments, this may be a result of additional information. The hypothesis behind this view is that obtaining value-relevant information about companies is easier for local investors. If there is a local bias and the reason is informational advantage, the level of local bias is expected to be more in equities in which the information asymmetry is higher. Different results are found in literature.

## 3. EMPIRICAL RESEARCH

### 3.1. Data

We use a unique data set; trade and balance data of 25,000 individual investors active in the equity market of BIST, having daily frequency and covering 5 years from the beginning of 2008 to the end of 2012. The data, are provided by the Central Registry Agency of Turkey (CRAT) which is a subsidiary of Borsa Istanbul and is the official central securities depository for capital market instruments, which are decided by Capital Markets Board of Turkey to be dematerialized. Total number of investors in Borsa Istanbul Equity Market is 1,097,791 as of the end of 2012<sup>1</sup>. When we exclude foreign and domestic institutional investors, there remain 1,086,400 domestic individual investors. In order to filter active investors, we put two criteria: we filter out individuals who had not traded at least once in the two-year period or held portfolios less than 1,000 TRY (approx. \$450) as of the end of 2012. Applying these filters, the sample size decreases to 250,827 investors. We apply these filters to select the sample from the population of active investors in the market. Our sampling method is stratified random sampling, more specifically; we keep the distribution of age and portfolio size subgroups in the same size as in the population.

<sup>1</sup> Source: Central Registry Agency of Turkey (MKG), www.mkk.com.tr. This figure has not changed significantly up to date, which is 1,054,532 in September 2016.

*Table 3: Descriptive statistics*

	All individuals	Women	Men
Number of individuals	24,996	6,049	18,947
<b>PANEL A: Age</b>			
Mean	46	47.5	45.5
Median	45	47	44
Standard deviation	12.2	12.6	12.1
<b>PANEL B: Average portfolio size (TRY)</b>			
Mean	52,628.5	34,271.4	58,489.2
Median	8,050.5	5,899.5	8,870.7
Standard deviation	490,674.4	184,765.3	553,706.6

The sampling period covers 5 years from January 1, 2008 to December 31, 2012. We obtain daily (1,259 days) portfolio and trade data (stock-by-stock) of all the investors throughout the sampling period. We get adjusted price series of the equities, for the return calculations, from Bloomberg. We include both bull (e.g. in 2010) and bear (e.g. global crisis of 2008 and 2009) periods of the market. We also obtain some characteristics of investors available in the database such as; the age and gender of the investors, the city they live in and the date of opening an investment account for the first time. Table 3 provides some descriptive statistics. The listed companies operate in 40 different cities of 81 cities in Turkey. Therefore, we limit our analysis with the investors living in these 40 cities. When we analyze the geographical distribution of investors across cities in the country, we notice that investors from Istanbul constitute 34 per cent of the total number of investors and 79 per cent of the free float market capitalization of Turkey belongs to Istanbul-based companies. In this regard, it may not be appropriate to label investments of investors living in Istanbul on Istanbul-based companies' stocks as local. So, we exclude investors living in Istanbul. Investors from the three biggest cities of Turkey (Istanbul, Ankara and Izmir) constitute approximately 55 per cent of the sample. Table 4 summarizes the geography of the investors at region-level and provides a comparison among the regions.

*Table 4: Geographical distribution of investors (by region)*

Region	# of investors	# of investors (%)	Share of female investors (%)	Age (mean)	Portfolio size (mean)	Portfolio size (median)
Aegean	4,156	16.7	24.0	47.4	48,572.5	6,945.2
Black sea	1,764	7.1	18.4	45.1	27,869.1	7,150.4
Central Anatolia	3,895	15.7	23.7	46.4	43,991.5	7,453.6
Eastern Anatolia	460	1.9	10.4	42.4	21,451.4	8,246.9
Marmara	11,696	47.0	27.2	45.9	66,241.7	9,038.9
Mediterranean	2,368	9.5	20.5	46.0	34,047.0	7,427.5
Southeastern Anatolia	526	2.1	10.8	40.9	29,423.1	8,132.9

### 3.2. Methodology

Our methodology consists of three steps: 1<sup>st</sup> step: Precise statement of local investment; 2<sup>nd</sup> step: Test of local bias; 3<sup>rd</sup> step: Determination of the reason of local bias (familiarity / information asymmetry). We use 5 alternative definitions of "local investment" derived from



the literature review: Investment in the same city (L1); investment in the same geographical region (L2); investment in the same economic region (L3); investment closer than 100 kms to the investor (L4); investment closer than 250 kms to the investor (L5).

The second step consists of the identification of the local bias: (1) We calculate the average weight of investor portfolio invested locally. (2) We further calculate weight of these local stocks in the market. (3) Last, we subtract the latter from the former and obtain our local bias measure. More specifically:

- LB1 : (Proportion of the investments of the investor in the firms which are located in the same city) – (Proportion of all the firms located in that city in total market capitalization).
- LB2 : (Proportion of the investments of the investor in the firms which are located in the same geographical region) – (Proportion of all the firms located in this geographical region in total market capitalization).
- LB3 : (Proportion of the investments of the investor in the firms which are located in the same economic region) – (Proportion of all the firms located in this economic region in total market capitalization).
- LB4 : (Proportion of the investments of the investor in the firms closer than 100 km to his residence) – (Proportion of all the firms located in this area with 100 km radius in total market capitalization).
- LB5 : (Proportion of the investments of the investor in the firms closer than 250 km to his residence) - (Proportion of all the firms located in this area with 250 km radius in total market capitalization).

Finally, we investigate the reason of local bias. To this end, we calculate the returns of investors' portfolios. If returns of local investments are significantly higher than non-local ones, we can claim that the local bias is related to the accessibility to advantageous information, in other words, investors are thought to have informative advantage in their decisions. Otherwise, local bias is thought to be due to a behavioral bias like familiarity. We basically calculate average raw and market-adjusted returns for local and non-local investments and compare them.

### 3.3. Results

By using our first local bias measure (LB1), we find evidence that there is a local bias in the Turkish equity market (5.66%) at 1% significance level and consequently, we confirm the previous evidences in this strand of literature. At city level, evidence of a local bias is found in 21 of 39 cities. The highest levels of local bias are in Karabük (43.81%), Zonguldak (21.66%), Isparta (16.02%), Mardin (14.67%) and Bolu (10.11%), respectively. There is only one company each in Karabük and Zonguldak, which are big steel companies with large employee bases. The fact that the employees hold stocks of those firms seems the main reason for such a high level of local bias. The city-based method naturally misses the investors in the remaining 41 cities where there are not any listed firms. Hence, in the next step, we calculate the local bias across geographical regions (LB2). Table 5 gives the results across six geographical regions. We exclude the Marmara Region with the same reason as we excluded Istanbul in the city-level analysis. We find that the investors prefer local stocks in all the regions. The highest level of local bias is evident in the Black Sea Region (19.61%), most probably due to the high level of local investment in Karabük and Zonguldak, which we mentioned above. Aegean, Mediterranean, and Central Anatolia regions rank second to fourth levels, respectively. The results are in line with the city-level analysis: 13 of 21 cities for which we find local bias at the city level are located in these three regions. The eastern regions have significant but much lower levels of local bias.

Table 5: Local bias in Turkey (geographical region-level measure) (LB2)

Sample	Number of investors	Local bias (LB2)	t-value	Significance
Aegean	4,145	8.55%	24.51	***
Black sea	1,763	19.61%	23.05	***
Central Anatolia	3,891	3.74%	12.99	***
East Anatolia	460	0.40%	3.13	**
Mediterranean	2,364	5.71%	15.40	***
Southeastern Anatolia	526	1.98%	3.61	***

\*\*\* : 1% significance.  
 \*\* : 5% significance.  
 \* : 10% significance.

One may argue that geographical regions are too wide, and economic or financial linkages within these regions may be too weak to imply locality. Therefore, we make an additional analysis based on the Turkish Statistical Institute's classification (LB3). They classify 81 cities of the country into 26 economic regions. The rationale behind this classification is common economic activity. The findings are consistent with those obtained by using LB1 and LB2. We can conclude that our city- and region-based results are consistent also with previous findings (e.g. Zhu, 2002). Based on the other methodological approaches in the previous studies (e.g. Coval and Moskowitz, 1999), we further analyze the existence of local bias through pre-specified distances between the investors and the companies. In this case, the companies operating close to the investors (less than 100 km and 250 km) are accepted as local (LB4 and LB5). We again find that the investors weigh stocks close to themselves significantly more, in their portfolios. The average investor invests 5.73% more of his portfolio in the stocks at most 100 km far away. The ratio is 4.60% for the stocks at most 250 km far away. Similar to the findings of almost all of the studies in the literature, we find that the individual equity investors in Turkey have tendency to weigh local stocks more in their portfolios. The next question in the literature is what the reason for such a tendency is. There are two main candidates for the reasons, as we mentioned in the introduction and the literature review sections. First, the investors may have informational advantage due to their proximity to the companies. Second, on the opposite, they may not have any extra valuable information; instead, they may basically be familiar with these stocks. The standard way to answer this question in the literature has been to compare return performances of local and non-local investments. As Hau (2001) suggests, to learn more about information asymmetry, we must look directly at investment profitability. If the investors earn money from their local investments, we may imply that they have additional information on these investments. Accordingly, first, we calculate daily returns of equity investments for each stock. Next, we calculate weighted average of the portfolio returns for each investor. We both calculate raw and market-adjusted returns (adjusted with the benchmark index, BIST 100). As shown in Table 6, we find that local investments have significantly higher average return (4.34%) than that of non-local investments (2.83%). However, when it comes to adjusted returns, we observe that the difference disappears. The average adjusted return is 2.22% for the local investments and 2.64% for the non-local investments. The difference is not statistically significant, which implies that investors buying local stocks do not have informational advantage with respect to the non-local investors. Our results support behavioral motivations (i.e. familiarity hypothesis).

Table 6: Return performance of local investments

Sample	Number of investors	Average return	t-value	Significance
<b>Raw return</b>				
Local	5,115	4.34%		
Non-local	13,648	2.83%		
Difference (Local-Nonlocal)		1.51%	2.02	**
<b>Adjusted return</b>				
Local	5,115	2.22%		
Non-local	13,648	2.64%		
Difference (Local-Nonlocal)		0.42%	0.63	-

#### 4. CONCLUSION

In this study, we provide evidence from the Turkish equity market for the well-documented finding that investors have tendency to weigh equities geographically closer to them. We further focus on the motivation behind the local investments. The reason of local bias is still an open question in the literature. Our answer to this question is that investors' tendency to invest in local stocks is not informational, but behavioral. To the best of our knowledge, this study is the first one focusing on local bias and its reasons in Turkey. We move the debate on local bias and its reasons to a new market, which may contribute to future research on cultural differences in investor behavior. Creating new links between local bias and the other behavioral biases may be another line for the future research, especially to reach more comprehensive theory of behavioral finance. Our findings on the investing behavior of Turkish individual investors may have implications for policy makers to enhance equity culture in the country. Documentation of the reasons for selecting stocks –other than rational, informative motives- may be meaningful in order to increase financial awareness throughout the whole country. Policy makers working for increasing long-term saving in the country may benefit from the findings on behavioral patterns of individual investors. The study also gives several implications on regional differences throughout the country.

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## **BUILDING A RESILIENT ORGANIZATION – HOW CULTURE CAN FOSTER INNOVATION IN SMALL BUSINESSES**

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### **ABSTRACT**

*Flexibility and innovativeness can give small businesses key competitive advantage in today's turbulent and uncertain environment. At the same time, these enterprises have lower capacity, more constrained resources and higher perceived risk to innovate. By understanding innovation in a broader way and looking beyond research and development investments into organizational structures, behaviors and processes, these enterprises can enhance their competitiveness. Organizational innovation is often studied in large, industrial contexts, this study aims to provide more insights for economies that largely depend in small businesses. This study assesses the role of organizational culture – shared assumptions, values, behaviors and practices on organizational innovation - new organizational methods in business practices, workplace organization and external relations via an empirical study. It further explores, whether organizational innovation increases business competitiveness and whether it encourages implementation of other forms of innovation – such as product, process or marketing innovation. Surveying over 500 small enterprises in Latvia, this study assesses the impact of organizational culture on organizational innovation. It finds that organizational culture and organizational innovation are related, and that stronger organizational culture leads to better organizational innovation performance. It further explores, whether cultural dimensions and innovation performance differs, depending on the size of enterprise. This study also confirms that organizational innovation increases competitiveness and can become a step towards fostering other forms of innovation. The study proposes insights that contribute to theoretical and practical discussions on fostering small businesses innovation in small economies.*

**Keywords:** *resilient organization, organizational culture, organizational innovation, small businesses, competitiveness*

### **1. INTRODUCTION**

The global context is changing. Ambiguous and rapidly changing business environment and the high level of competition brings enterprises under intense pressure to perform. Global growth is slowing down – Euromonitor International forecasts the global GDP growth at just 3.5% per year till 2030, and developed countries are expected to only grow at an average 1.6% per year (Euromonitor International, 2017). This could lead to falling consumer spending, shrinking market size and businesses increasingly competing to sustain their shares in it. In light of these developments, resilient structures and disruptive innovations can be the best approaches to ensure long-term competitive advantage. Forward looking businesses with ability to adopt to ambiguous and quickly changing market developments, while remaining focused on their strategic priorities, have a better chance to withstand disruption. Small businesses are very important for most of European economies, as, according to the Eurostat, they represent over 99 % of all enterprises, create substantial proportion of growth and employ an increasing number of people (Eurostat, 2017). Considering the new global context, these businesses are no longer competing just in their local environments. Emerging technologies and general mobility of goods, services and consumers make the competition global. Innovations could give small businesses an opportunity to differentiate themselves and stand out of the competition using attractive niches with loyal customers (Porter, 1980). Yet small business significantly lag

behind large enterprises in terms of innovation in Europe – according to the Eurostat, just 48% of small and medium-sized enterprises can be considered innovative, while the share grows till 78.1%, when considering large enterprises (Eurostat, 2017). Several causes for this issue could be identified. Innovations often involve a large degree of ambiguity and complexity (Kline and Rosenberg, 1986) – smaller businesses might not want to take that much risk. And small business might not be able to commit their scarce resources for such long-term, often large-scale initiatives (Acs and Audretsch, 1988; Nooteboom, 1994). Larger businesses have an opportunity to diversify their activities and develop new ideas along with their existing business lines, smaller businesses might be able to commit their resources to very few priorities without such an opportunity to mitigate their risk. Small businesses might also not have the necessary human capital and competences to manage the innovation process. At the same time, smaller businesses could have more flexible working structures and might be able to take a more entrepreneurial approach (Nooteboom, 1994). This study argues that developing resilient organizational cultures – values, behaviors and practices – could give such businesses substantial advantages, especially for organizational innovations, including new business practices in workplace organization or in external relations. This study assesses the role of organizational culture on organizational innovation via an empirical study. It further explores, whether organizational innovation increases business competitiveness and whether it encourages implementation of other forms of innovation – such as product, process or marketing innovation.

## 2. LITERATURE REVIEW

Resilience is a cross-sectorial concept, often associated with ecology, where it is primarily linked to sustainability and resistance, and psychology, where it is mainly understood as positive adaptation capacity to unfavorable circumstances. From an organizational perspective, resilience can be seen as organization's ability to tolerate external shocks without disintegration (Kenda and Wachtendorf, 2003) or its systemic, inherent and adaptive capability that facilitates the adaptive capacity during turbulent times (Burnard and Bhamra, 2011). Importantly, resilience concerns not just the ability to survive unfavorable conditions, but also the ability to take advantage of these disruptive events and to become stronger (Weick, 1993; Parsons, 2010). Thus resilience also has a result oriented, proactive and forward-looking angle. Organizational resilience can be observed in case of adverse events (the passive resilience), and also through deliberate organizational efforts to develop capabilities to deal with such adverse events in future (the active resilience) (Somers, 2009, Pasteur, 2011). The previous research has suggested resilience as a key strategic advantage (Cheng, 2007) and ability to anticipate innovations needed by consumers in the marketplace (Teixeira and Werther, 2013). A resilient enterprise has internal capacity to react to external problems and risks. Thus it is also understandable, why small businesses should strive to become more resilient. Resilience can be affected by various internal and external factors, and culture play an important role amongst them (Parsons, 2010; Hiles, 2011). Organizational culture generally include values, norms, attitudes and established ways of working that are shared within that organization. It can be seen through shared basic assumptions gradually developed through responding to external challenges and transferred to new members of that organization (Schein, 1985). Organizational culture explains the way how an organization addresses problems and makes choices (Louis, 1980), and it affects the working climate and behavior within the organization (Saffold, 1988) – culture guides organizational decisions on what is important and what is valued. And culture is further closely linked to innovation. Previous studies have related long-term thinking, risk-taking abilities and individual responsibility with the capacity to innovate (King 2007; Turró et al., 2014). Organizational culture affects decision-making processes and organization's ability to adjust to external changes (Throsby, 2001). Cultural values determine, how hierarchical and

effective the organization is (House and Javidan 2002, Aktas et al., 2015). Thus by developing culture, small businesses could achieve better innovation performance (Ledwith, 2000; Laforet and Tann, 2006; Pullen et al., 2009). This study considers innovation in a broader way, based on the Schumpeterian approach towards five forms of innovation, including new products, new production methods, new markets, new supply sources and new forms of organization (Schumpeter, 1934). According to this classification, some innovations can be considered technical (new products and new production methods), while others are non-technical (new markets, new forms of organization). Organizational innovation would be considered as non-technical, process innovation. Organizational innovation can be understood through teamwork, job enrichment, decentralization and continuous improvement (Womack et al., 1990). Organizational innovation also include new managerial and working methods (Damanpour, 1987). Organizational innovations can be further categorized as structural or procedural, and inter-organizational or intra-organizational (Armbruster et al., 2008). Eurostat's and the Organization's for Economic Co-operation and Development (OECD) Oslo manual defines organizational innovations through new organizational methods in the business practices, workplace organization or external relations (OECD-Eurostat, 2005). Organizational innovations can be supporting factors for product and process innovations, and aspects improving enterprise performance as such (ibid). This study assesses, how organizational culture affects organizational innovation in small businesses, and whether organizational innovation can further increase competitiveness and help to enhance other forms of innovation in these enterprises. This study contributes to research on small business innovation.

### **3. METHODOLOGY**

A structured questionnaire was developed to assess, how organizational culture affects organizational innovation in small and medium-sized enterprises. Organizational culture was structured along the dimensions of proposed in the Competing Values Framework by Quinn and Rohrbaugh (1983), later developed further by Denison and Spreitzer (1991). The Competing Values Framework consists of cultural orientations along two dimensions – internal versus external orientation and flexibility versus stability or control. The framework includes four organizational models - the Internal Process Model, which is oriented towards systems, stability and continuity, the Open Systems Model, which is oriented towards development, growth and transformation, the Rational Goal Model, which is oriented towards productivity and accomplishment, and the Human Relations Model, which is oriented towards team and participation (Denison and Spreitzer, 1991). The second part of the questionnaire consisted of statements about organizational innovation. An organizational innovation index was developed to measure to what extent the enterprise used cross-functional project teams, systems for quality management, outsourcing and external cooperation – for instance, with business associations and business support agencies. The third part of the questionnaire assessed, whether the enterprises believed that organizational innovation helped them to increase competitiveness and foster other types of innovation. This part was only included in case there was any form of organizational innovation implemented. The final part was used to collect information concerning the profile of the enterprise – how long and in which industry it operated, where it was located, how many employees it had and what was the annual turnover. The questionnaire was distributed to senior managers of randomly selected small enterprises in Latvia. 528 responses were collected and included in further analysis.

### **4. RESULTS**

The enterprises surveyed had quite substantial experience in their industries – majority (44.3%) had been operating in their respective industries 10 – 20 years, 27.7% - more than 20 years, 25.9% 4 to 9 years, and just 2.1% 1-3 years. The sample did not include enterprises that had

been operating less than a year. Majority of enterprises (28%) had the annual turnover till 50 000 euro, 16.5% - more than 50 000 euro, bet less than 100 000 euro, 26.7% from 100 001 till 500 000 euro, 12.3% more than 500 000 euro but less than 1 million, and 10.2% - more than a million euro. 28% of the enterprises were located in the capital city Riga, 22.7% in large cities, 23.9% in other cities and 25.4% in rural areas. Geographically all regions of Latvia were quite equally represented. Most of respondents represented service industries (Fig 1) – including services and other (in total 56%), 23% trade, 23% manufacturing and 6% agriculture.

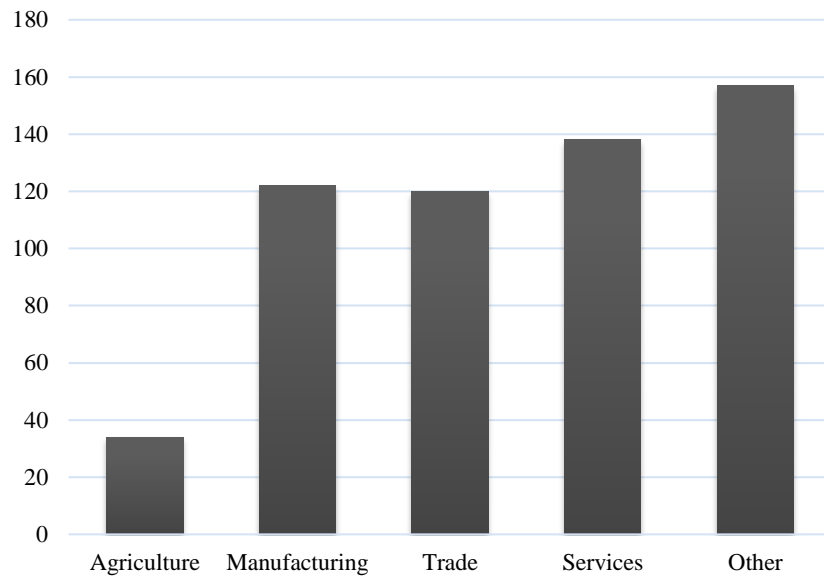


Figure 1: Enterprises by industry (Survey data)

In terms of organizational culture, human relation model or team organization was the strongest amongst the enterprises surveyed, followed by rational goals – result orientation, internal process – consistency orientation and last open systems – development orientation (Fig. 2).

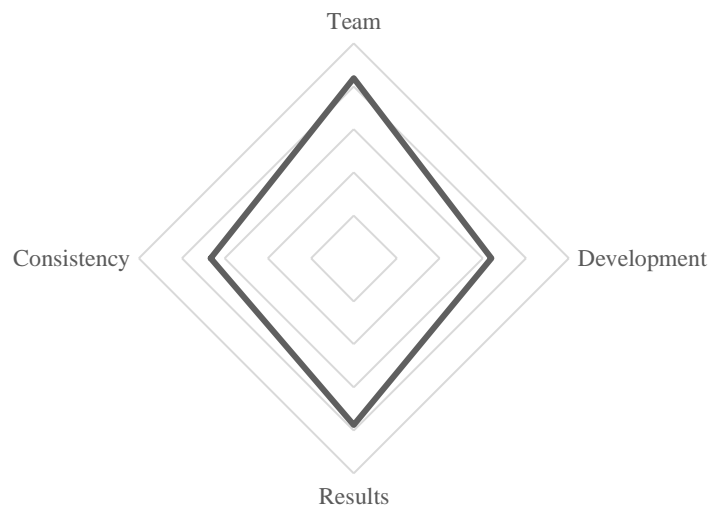


Figure 1: Organizational culture (Survey data)

Team orientation was the strongest amongst new enterprises, who had been operating less than 3 years, enterprises from Riga and in service industries. Development orientation was the strongest amongst enterprises that had the highest annual turnover, while it was particularly low in agriculture and manufacturing sectors. Result orientation has quite consistent across various



groups of enterprises, however lower in agriculture and manufacturing, as well as amongst enterprises from rural areas. And Consistency was the highest in agriculture and amongst new enterprises. Even though the Competing Values Framework contrasted different cultural orientations, this study found them positively related to each other – all cultural orientations were statistically significantly correlated to each other, and this relation was particularly strong between development and result orientation. Organizational innovation was the strongest amongst new enterprises that had been operating in market less than 3 years, amongst the enterprises that had the highest annual turnover, amongst enterprises from the capital city, while it was particularly low amongst enterprises with annual turnover less than 50 000 euro and in trade sector. The correlation between organizational culture and organizational innovation performance is displayed in Table 1 – it demonstrates a moderate, positive, statistically significant relation between development, result-orientation and consistency and innovation performance. Thus it is possible to conclude that organizational innovation is related to consistency, result and development orientation, while not statistically significantly related to the team orientation.

*Table 1: Organizational innovation and cultural orientations (Survey data)*

	Team	Development	Results	Consistency
Pearson Correlation	.023	.259**	.201**	.326**
Sig. (2-tailed)	.604	.000	.000	.000
N	504	496	493	504

The impact of organizational culture on organizational innovation performance was further analyzed using a regression model. The dimensions of organizational culture were considered as input values in this model, while organizational innovation performance as the dependent variable. A stepwise method with input variable selection criteria probability-of-F-to-enter  $\leq .050$ , probability-of-F-to-remove  $\geq .100$  was used to include just the significant factors in the model. From the given solutions, the model with the highest adjusted R square was selected. Following this approach, consistency and development orientation, as well as the annual turnover and location were included as factors in the model explaining organizational innovation performance. Summary of the regression models is provided in Table 2.

*Table 2: Summary of the Regression Models (Survey data)*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.341 <sup>a</sup>	.117	.115	2.040	
2	.387 <sup>b</sup>	.150	.146	2.003	
3	.416 <sup>c</sup>	.173	.168	1.978	
4	.427 <sup>d</sup>	.182	.175	1.969	1.412

- a) Input values: consistency,
- b) Input values: consistency, annual turnover,
- c) Input values: consistency, annual turnover, development,
- d) Input values: consistency, annual turnover, development, location.

Considering the fourth model, it is possible to conclude that 17.5% of the total variation in the organizational innovation performance can be explained by the respective input variables. The ANOVA analysis confirms that the regression model statistically significantly predicts the outcome variable. Coefficients of the input variables are listed in the Table 3.

*Table following on the next page*

*Table 3: Coefficients of Input Variables (Survey data)*

	B	Std. Error	Beta	t	Sig.
(Constant)	1.883	.369		5.097	.000
Consistency	.215	.039	.252	5.463	.000
Annual turnover	.216	.048	.191	4.493	.000
Development	.139	.040	.158	3.462	.001
Location	-.175	.079	-.093	-2.211	.028

Finally, according to the survey results, organizational innovation was statistically significantly related to both – enterprise competitiveness and enabling other forms of innovation, such as product, process and marketing innovations (Table 4).

*Table 4: Organizational innovation and cultural orientations (Survey data)*

	Competitiveness	Enabling other forms of innovation
Pearson Correlation	.478**	.464**
Sig. (2-tailed)	.000	.000
N	447	448

## 5. CONCLUSION

This study considered resilience, organizational culture and organizational innovation in small enterprises in Latvia. Previous studies confirm that organizational culture has an impact on innovation performance, for instance, through organizational structures, leadership, decision-making and internal cooperation. Assessing the organizational culture, this study confirms that small businesses in Latvia are more human relations – team oriented and the least development oriented. Hereby it is also possible to make a conclusion that team orientation is related to the number of employees – the smaller the enterprise, the more team oriented it is. Team orientation was the strongest amongst new enterprises, those located in Riga and those operating in service industries. Development orientation was the strongest amongst enterprises with high annual turnover, while it was particularly low in agriculture and manufacturing sectors. Result orientation was lower in agriculture and manufacturing, as well as in rural areas. And consistency was the highest in agriculture and amongst new enterprises. Assessing organizational innovation performance, this study found the strongest innovation performance amongst new enterprises, those with the highest annual turnover and those located in the capital city. The innovation performance was particularly low for businesses enterprises with annual turnover less than 50 000 euro and in trade sector. This study confirmed that organizational innovation performance is statistically significantly related to consistency, result and development orientation. A multiple regression model was developed to study the impact of organizational culture on organizational innovation performance. According to this model, this study can conclude that 17.5% of the total variation in the organizational innovation performance can be explained by the respective input variables. In terms of practical implications, this study highlighted that also small businesses need to take care of their organizational cultures – values, norms and behaviors, and they should try to shape their cultures to enhance the organizational innovation performance. This is especially relevant for striving to improve development orientation and ensuring more consistency throughout the organization for creating and maintaining an innovation boosting organizational culture.

This study also confirms, that organizational innovation is statistically significantly related to both – business competitiveness and enabling other forms of innovation. Some limitations exist to this study. For instance, the study design looked at the average organizational innovation performance and did not allow to assess, whether a particular innovation would actually be required for a particular enterprise. A more in-depth, qualitative study could be developed to assess this issue.

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## ACCOUNTING TREATMENT AND DOCUMENTATION OF COSTS IN EU PROJECTS

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### **ABSTRACT**

*The primary aim of this paper is to research the role of accounting of costs and costs documentation in the European Union projects. The costs as the accounting category can impact both on business and on European Union projects. There has been a slight change in business practice, especially thanks to possibility of business financing through the European Union funds, with the focus on more correct and transparent managing costs. Documentation of costs can provide properly synchronized documents with domestic legislation and international standards and European Union directives. Despite of numerous studies of types of cost and their documentation application, the same has still not been done in Croatia in the context of European Union projects. This paper explain how cost are planned and prepared for European Union projects, the importance of auditors trail in European Union projects implementation as well as documentation of costs by categories and most common mistakes in the process of documentation. Those mistakes arise mostly because of certain differences in legislation of European Union members and special rules of financial management and European Union directives. The difference between acceptable and unacceptable costs will be distinguished. Also, the role and importance of European Court of Auditors in the process of documentation and control of costs in European Union projects will be explained. For the purpose of writing this paper, the data were collected by secondary and primary research. Analyzed data has confirmed expectations that the role and importance of the European Court of Auditors is of great importance for documenting and controlling cost in European Union projects.*

**Keywords:** *documentation costs, EU projects, European Court of Auditors, types of costs*

### **1. INTRODUCTION**

One of the most important possibilities that the Republic of Croatia has achieved by its entrance in European Union, but also before that, is the possibility to withdraw funds from European funds and to finance different projects. During the project implementation the correct accounting treatment of those funds is necessary from few reasons. One of the most important reasons is achieving higher rate of usage of contracted funds which is possible by correct evidence of business transactions during that project. Some procedural mistakes are commonly arising in evidence of costs of services, goods and different works which leads to correction, i.e. decrease of granted funds. Also it is very important to insure clear audit evidence in order to protect interest of the Republic of Croatia but also of European Union (Bešlić, 2014). When it is about accounting of EU projects there are also some additional challenges in front of users of non-refundable funds because special rules of financial management prescribed by European Union should be satisfied except relevant national legislative and international accounting standards. Those rules are not less demanding in comparison with national and international but are combination of those rules in respect of that national Croatian legislation is adjusted with EU legislation in the process by which the question of acceptable costs is solved (Maletić, I.

et.al., 2016). The user has to ensure appropriate accounting system for project monitoring which can be the part of regular system or special system. European Union ensures financial support and non-refundable funds for large number of projects and programs in the field of education, healthcare, consumers' protection, environmental protection and social services. Every cost for which the user requires refund has to be proved by collateral documentation. The evidence for cost emergence can be the following (Uputa o prihvatljivosti troškova plaća i troškova povezanih s radom u okviru Europskog socijalnog fonda u Republici Hrvatskoj 2014.-2020., 2016):

- work contracts, work contract appendices, time sheet schedules, paylines, bank accounts with net payrolls, contributions, taxes and surcharges, etc.
- travel tickets, travel orders, records of use by an official vehicle, fuel bills, payments from cash registers or giro account for travel expenses etc.
- documentation on procurement procedures, procurement contracts, contractor's, suppliers 'and service providers' accounts, evidences for receipts, payment orders, bank statements as proof of payment etc.

The usage of financial help in EU projects performance is subject to rigorous rules of documentation in order to ensure direct supervision on the funds usage with the aim of its spending in transparent and responsible way. In order to achieve that it is necessary to establish independent auditing body – Agency for the audit of European Union program implementation system. Given that the control of a particular project can be carried out even after several years after the completion of the project, the user of funds withdrawn from EU funds is obliged to keep financial, accounting and other project documentation, which is called archiving. The usual storage period of the documentation is between 5 and 7 years depending on the fund and sometimes less than in the case of IPA pre-accession funds, which prescribes the preservation of documents 3 years after the project is concluded. The time limit begins to run out of the final payment tare. During that period, "ad hoc" financial audits from a number of bodies, whether it be bodies at the level of the Republic of Croatia or the European Union, are possible and users are obliged to provide access to project implementation locations, information systems, all documents and databases. (Maletić, I. et al., 2016)

*Table 1. Types of documents to be archived (authors according to Beaumelou, 2009)*

Administrative documents	- a copy of the application - contract with the contractor and supplement - a contract with all partners - complete contest documentation or bidding
Technical documents	- user list - personal user information
Financial documents	- invoices relating to the project - evidence that the accounts are actually paid - a clear link with project activities
Other	- training (space, equipment, list of training providers, list of materials etc. - seminars and conferences (topics, list of speakers, materials, space and equipment) - publications (copies of publications, list of persons) - external experts (job description, work hours records, sample reports)

## **2. DOCUMENTATION OF COSTS IN EU PROJECTS**

### **2.1. Planning and preparing costs for EU projects**

Activity arrangement is the format for analysis and graphic presentation of project activities. It helps in determination of their logic order, expected duration and all interdependencies among activities and also offers the basis for management responsibilities. After schedule of activities further specification of resources and cost allocation. After preparation of activities schedule and costs it is important that cost estimations are based on careful and intensive budget preparation. Those estimations will have significant impact on decisions in the phase of project evaluation and later on undisturbed project performance. Activities should be implemented in the proposal of resources allocation. Each activity should be used as control list in order to ensure all needed resources in the frame of that activity. In this phase budget preparation of management is very important. After activities are entered into schedule the resources for activities performance should be given. Resources should be divided into arranged cost categories. Cost should be divided among different sources of financing. Password for source of financing can be used for distribution of all costs and determining of total amounts. By cost password costs can be divided again in order to calculate total cost per cost category. Now it is possible to divide cost per planning period by using simple formulas for multiplying annual amount with unit cost. After total costs are calculated the refunds of reversible costs of service providing after the project has finished. Those costs can be refunded (in total or partially) from increased revenue which has occurred through project activities. It is important that influences of project on net reversible costs are clear so future influence on the budget of implementing agency (Smjernice za upravljanje projektnim ciklusom, 2008). This way of connecting activities and costs, i.e. cost allocation on activities can be connected with determination of total and unit cost by using activity based costing method which is one of the most accurate methods of cost determination.

### **2.2. Audit trail in EU projects implementation**

The term of audit trail is connected to project performance independent from performance field and project purpose as well from financing source. Adequate and systematic evidence and archiving of documentation which have occurred during project performance. That enables simple and fast reconstruction of all performed project activities even few years after the project is finished (Bešlić, 2014). An audit trail is connected with project performance and represents secure, relevant and chronological notation which is documentary evidence about activities which have influenced on certain action or activity in any time during the project performance. The purpose of audit trail is demonstration of documented flow of financial and other transactions from their beginning till the end of the project. That will enable reconstruction of each activity and its approval (Priručnik za provedbu projekata financiranih iz Europskog socijalnog fonda 2007.-2013., 2007). An audit trail contain documentation, reporting, accounting and archiving systems. It is an important source for auditors and other controllers during the preparation and performance of audit or other controls. All documents and evidences connected to activities should be archived in order to ensure appropriate audit trail. All documents should be archived according to relevant regulation (Priručnik za korisnike bespovratnih sredstava, 2014). The purpose of the audit trail is to allow a review of all costs incurred and confirmation of successful project objectives and is intended for the needs of the audit team, whether it is a team from a private auditing firm, the European Court of Auditors, the European Commission, the State Office or the Audit Agency of the European Union Program (ARPA) (Bešlić, 2014). Documents must be kept either in the original or in a form which is in accordance with national law and certified in accordance with the implementing regulation. If the documents exist only in electronic form, the computer systems used must meet accepted security standards to ensure that the stored documents comply with national legal

requirements in order to be reliable for auditing purposes. At the project level, users must have either a separate accounting system or appropriate accounting codification for all project-related transactions, without prejudice to national accounting rules (Priručnik za korisnike bespovratnih sredstava, 2014). The job of the auditor is not to search for connections between planned and performed activities, planned and occurred costs and accounting evidences. All mentioned is actually an obligation of user. So the user has to ensure connection between all project costs by logical and systematic archiving system which is then confident system for monitoring of project performance (Maletić, I. et al. 2016).

### **2.3. Documenting costs by cost category**

Considering numerous reporting obligations, different controls and audits during and after the project performance which applies for EU funds as well as period of documentation archiving after the project is finished it is very important to document costs, to archive all documents and to ensure clear audit evidence. Every person which is connected to project documentation should get clear picture of project activities performance and about acceptable costs (Maletić, I. et al., 2016). When implementing EU projects, it is necessary to ensure that documents are filed in accordance with national legislation, prescribed by the internal rules of the project provider or on the basis of good practice. Given the numerous "ad hoc" audit reports and the prescribed documentation retention period after the project is completed, it is extremely important to document the costs properly and to preserve all the necessary documentation. (Bešlić, 2014). It is necessary to meet all requirements (European Union requirements as well of national but also international accounting by project among several countries). Component of every project is insurance and implementation of appropriate accounting system. This system has to enable that all costs should be easily identified and checked. The above mentioned is ensured by budget classification and by individual cost location/profit center for the project. Also, simple identification can be enabled through clear identification and cost monitoring per project. In accordance with that properly adjustment of every financial report with accounting and other relevant evidences. Also, simple identification and control can be enabled if under existing system clear identification and cost monitoring per project is established. In accordance with that all financial statements should be adjusted with accounting and other relevant information. All costs that occur in accordance with cost categories from project budget should be recorded according to cost type (Maletić, I. et al., 2016.). The amounts of those costs are available from pay sheets, travel order forms, evidences about payment, invoices, contracts etc. So, it is necessary to open analytical accounts which are connected to a certain project in order to get the project balance sheet and all documents that are recorded in the main ledger and are connected to the project realization. All the above mentioned is very important precondition for project management and for preparing all relevant reports for competent bodies.

## **3. ACCEPTABLE AND UNACCEPTABLE COSTS**

Costs in EU project are divided into two groups: acceptable and unacceptable costs which are different depending on European Union funds but also on rules prescribed by competent bodies.

### **3.1. Acceptable (eligible) costs**

The main acceptability of costs is defined by European Commission directives. Additional rules connected with cost acceptability are the part of program documents and are detailed explained in books of regulation and instructions for every program. It is necessary to follow those rules in order to avoid the possibility of unacceptable costs. Competent bodies can determine additional limitations of acceptable expenditures on the level of priority, project type, individual assignation or call for delivering project proposals (Maletić, I. et al. 2016). Users are obliged to follow national legislative and positive acts of the Republic of Croatia together with



prescriptions of book of regulations when determining the amount of payments for certain charges.

*Table 2: Categories of acceptable costs and justifications within the European Social Fund (authors according to Priručnik za provedbu projekata financiranih iz Europskog socijalnog fonda 2007.-2013., 2007)*

Type of cost	The document on which the request for reimbursement is based	Documents that prove that the expense was paid	Note
Salary of employees on the project	Contract of employment, student contract	Decision on appointment in a project team or an employment contract annex, from which the work on the project, records of working hours, payment lists, proof of paid taxes and contributions (JOPPD form), payment evidence (bank statements)	Wage allowances for annual vacation and paid leave, salaries for which the employer can not receive refunds from other sources and other payments in accordance with the applicable legislation and the rest are permitted
Increase of salaries during the implementation of the contract or before the signing of the contract	Contract of employment	Related Appendices to the Employment Contract, Payments Lists, Evidence on Taxes and Contributions, Payment Evidence	Exclusively if it is a regular salary, this increase is the result of a regular salary policy of the institution.
Volunteer work	Contract of volunteer	Record of volunteer working hours, volunteering diary	Volunteer work can be expressed as a project cost in terms of indicators, but work equivalence can't be included in the budget.
Hot meal	Calculation	Payment evidence (bank statements, payouts, etc.)	According to the percentage of project work
Travel diaries	Travel warrant	Invitation to event, signing event list, etc., travel report, proof of payment	The amount of the allowance to be paid to the employee is determined by the employer through internal acts.
Supply of (durable) equipment	Invoice	Tender documentation used for procurement of equipment, bids, order forms, contract, delivery note, proof of payment.	If a transfer of ownership between a partner or a third party occurs, it is necessary to notify PT 1 and PT 2 in writing and, when transferring to a third party, request a prior written approval from PT 1 and PT 2.
Depreciation of long-term equipment	Calculation of depreciation	Statement of Depreciation, Invoice for Purchased Equipment	The depreciation charge is calculated on a pro rata basis using long-term assets and solely for the duration of the project.

Table 2 shows only some types of eligible and conditional costs, explaining how these costs are documented, i.e. how their creation and payment are justified. Indicate accompanying documentation that justifies the cost indicatively and is always read in a manner that is applicable in a particular situation. This documentation will also be requested during project and reporting audits. Acceptable costs consist of direct and indirect costs. Direct costs are all costs that can be directly traced on certain activity. Those costs are direct salaries, direct costs of subcontracting, direct costs of financial grant to third parties and other direct costs (for

example travelling costs). Indirect costs are costs that are not directly connected to activities and cannot be directly traced to a certain project activity. For example, those cost can be costs of bank services, postage and similar. Those cost are acceptable if they are notified on the basis of flat-rate amount of 25% of acceptable direct costs which don't include costs of subcontracting and costs of contribution in nature given by third parties and which are not used in the users' location. The cost acceptability is in most cases defined by program documentation and call for project proposals delivery. The contract about non-refundable funds is the legal basis which defines the acceptability of costs in detail. Only real costs that are meeting following criteria are acceptable (Maletić et al., 2016). That are costs that have occurred during the project performance period, that are foreseen by budget, that are necessary for activities performance, that are real and verifiable and that are justified and in accordance to principles of good financial management. In order to meet mentioned criteria users of EU funds have to establish appropriate accounting in accordance with the best practice, usual procedures and liabilities defined by the contract.

### **3.2. Unacceptable (non-eligible) costs**

Users of EU funds have to investigate which expenditures are considered as unacceptable because such expenditures are not covered by financing with non-refundable funds. Those expenditures are in the most cases strongly connected to successful project implementation so the users have to plan sources of funds for those costs. Except in rules about cost acceptability and in the call for delivery of project proposals are clearly defined costs that are not acceptable for financing and so users have information about unacceptable costs in advance. If unacceptable costs make a big part and are necessary for project performance then the user know how much of own funds must be ensured for covering those costs in advance. Including of unacceptable costs in requirements for refunds is considered as malversation. That can lead to refund of irregular spent funds and even audit of whole project because of predicament in cheat (Maletić, I. et al. 2016). The examples of unacceptable costs are anniversary fees, benefits for apart life, contributions for voluntary health or pension insurances which are not obliged according to national legislative and lump sum as material rights of employees. It is necessary to emphasize that mentioned rules can have exceptions and that certain costs in certain funds are acceptable costs while in other funds are treated as unacceptable. Table 3 shows the types of costs and their eligibility or non-eligibility depending on the fund (Cohesion fund – CF, European Regional Development Fund – ERDF and European Social Fund – ESF) to which the user submit.

*Table following on the next page*

*Table 3: Examples of Unacceptable and Conditional Eligible Expenditures (authors according to Maletić, I. et al. 2016)*

Br.	Expenditure type	Fund for which the expenditure is unacceptable or conditional
1.	VAT (value added tax)	Unacceptable for ERDF, CF, ESF
2.	Interests on debt	Unacceptable for ERDF, CF, ESF
3.	Investments in capital or credit investments	Unacceptable for ESF
4.	Expenditure associated with investing in a housing secrecy	Unacceptable for CF
5.	Expenditure associated with companies in difficulty	Unacceptable for CF, ERDF
6.	Purchase of used equipment	Unacceptable for ERDF, CF ESF
7.	Buying vehicles that are used in accordance with project management	Unacceptable for ERDF, CF ESF
8.	Refunds, contributions for health or pension insurance not subject to national legislation	Unacceptable for ERDF, CF ESF
9.	Non-taxable bonuses for employees	Unacceptable for ERDF, CF ESF
10.	Penalties, financial globe, and court dispute costs	Unacceptable for ERDF, CF ESF
11.	Operational costs	Unacceptable for ERDF, CF ESF
12.	Losses due to exchange rate fluctuations	Unacceptable for ERDF, CF ESF
13.	Buying land and real estate infrastructure	Unacceptable for ESF and conditional for ERDF, CF

#### **4. THE ROLE OF EUROPEAN COURT OF AUDITORS AND THE MOST COMMON MISTAKES IN THE PROCESS OF DOCUMENTATION**

The main role of the European Court of Auditors is to verify the correctness of the collection and use of EU funds and to contribute to the better management of the European Union's finances. It is considered as an independent guardian of the financial interests of European Union citizens. Court reports represent added value to the European Union's financial management as it contributes to development through its work. The Court's objective is to produce high-quality, clear, relevant and timely audit reports based on robust criteria and solid evidence and are considered important and influential documents. In order to effectively enforce its jurisdiction, the Court of Auditors must be independent of the institutions and bodies in which it conducts audits. The Court also decides what will be the subject of review, how it will be implemented, and where and how it will present its conclusions while the main audit activities of the Court are those relating to the activities of the European Commission as the main body responsible for the execution of the budget of the European Union.

The main features of the Court are manifested through three types of audit (Institucije EU-a i ostala tijela: Europski revizorski sud, 2016):

- *Financial audit* - verifies whether EU funds are properly collected and used, and whether they value the money,
- *Compliance audit* - verifies the accuracy of the financial statements presented in the financial statements
- *Audit of business efficiency* - verifies whether the EU's financial resources have achieved the goals with the least possible resources in the most economical way.

Examples of the most common errors in the process of using funds relate to four important categories, namely competitiveness for growth and employment; economic social and territorial cohesion; natural resources and security and citizenship. The main risk to the fairness of transactions when providing grants to users is the case where users report unacceptable costs that are not disclosed and are not corrected before the commission compensates for the stated costs. Different types of errors often stem from non-compliance with the rules on public procurement, unacceptable indirect costs, payments for which no accompanying documentation is provided, other unacceptable costs such as travel expenses and equipment costs, miscounted costs for staff and other (European Court of Auditors, 2015).

## 5. CONCLUSION

In this paper the most important cost categories in projects financed by European Union funds were presented. Also, some examples of the most common mistakes in cost recording are discussed. Those mistakes mainly arises from certain differences in legislation of European Union member countries and special rules for financial management and EU directives for documentation and recording of costs. Even small differences can lead to big mistakes and bring into question the eligibility of costs. This paper has repeatedly emphasized the importance of maintaining a good accounting record and thus providing an audit trail in order to maintain a high quality record of the project in a quality and error-free manner, thus ensuring the withdrawal of funds from EU funds. Therefore, it is very important for the project to involve as many stakeholders as possible in order for the project to gain relevance and thus consider the project from all aspects, and accumulate a lot of opinions from different professions and interest groups that are connected to a certain project. In recent years, growing awareness of the importance of EU funds for the overall economic picture in the Republic of Croatia has been increasing in Croatia and in some of the European countries it is obvious that the area offers tremendous potential that can be returned multiple times with little invested knowledge. The role of European Court of Auditors is of great importance for documentation and control of costs in EU projects.

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## ACCOUNTING AS FACTOR OF LIMITATION OF CASH BASIS CORPORATE INCOME TAXPAYER IN CROATIA

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### ABSTRACT

*All entrepreneurs, corporate income taxpayers keep accounting books according to the accrual basis as well as the financial statements, except cash flow statement. Micro and small entrepreneurs make 98.5% of total number of entrepreneurs in Republic of Croatia. Micro and small entrepreneurs need support tax and credit institutions for further development. Since 2015, all taxpayers with a turnover of up to HRK 3,000,000.00 can choose the payment of value added tax according to cash basis. Also, the same principle to payment the company income tax according to cash basis is allow for all taxpayers with a turnover of up to HRK 3,000,000.00 from 1.1.2017. In this first year of implementation, only a small number of entrepreneurs took advantage of the possibility of payment of corporate income tax on a cash basis. The main aim of this paper is to examine how the corporate income tax payers managed to reconcile its accounting books of accrual basis and took advantage of the ability to pay corporate income tax to the cash basis. Only the one small part of the micro and small entrepreneurs took the advantage of that legal benefits and the rest of them point out that the accrual basis accounting is one of the main factor of limitation why they did not use that tax benefit.*

**Keywords:** *accounting, accrual basis, cash basis, corporate income tax*

### 1. INTRODUCTION

In the Republic of Croatia, economic activity is performed by taxpayers on income tax (IT) and taxpayer on corporate income tax (CIT). CIT taxpayers, 114,483, submitted financial statements for 2016 year. Considering the size of entrepreneurs, the micro entrepreneurs was 102,764 (89.7%), small was 10,045 (8.8%), medium-sized was 1347 (1,2%) and large was 327 (0.3%). All business groups concluded with profit in 2016. Net profits of micro entrepreneurs amounted to HRK 302.6 million, small businesses realized 5.7 billion kuna, medium-sized entrepreneurs also 5.7 billion kuna and a large 12.4 billion kuna according to the information of FINA (FINA, 2017). Small and Medium-Sized Enterprises (SMEs) make up 99.7% of entrepreneurs in Croatia. The number of entrepreneurs was determined according to the Accounting Act (NN 120/16), which is in line with Directive 2013/34 / EU. As shown in Table 1, the criteria for classifying taxpayers by size depend on total assets, revenues and number of employees. Taxpayers is classified in the same group if their balance sheet dates do not exceed the limits of 2 of the 3 criteria.

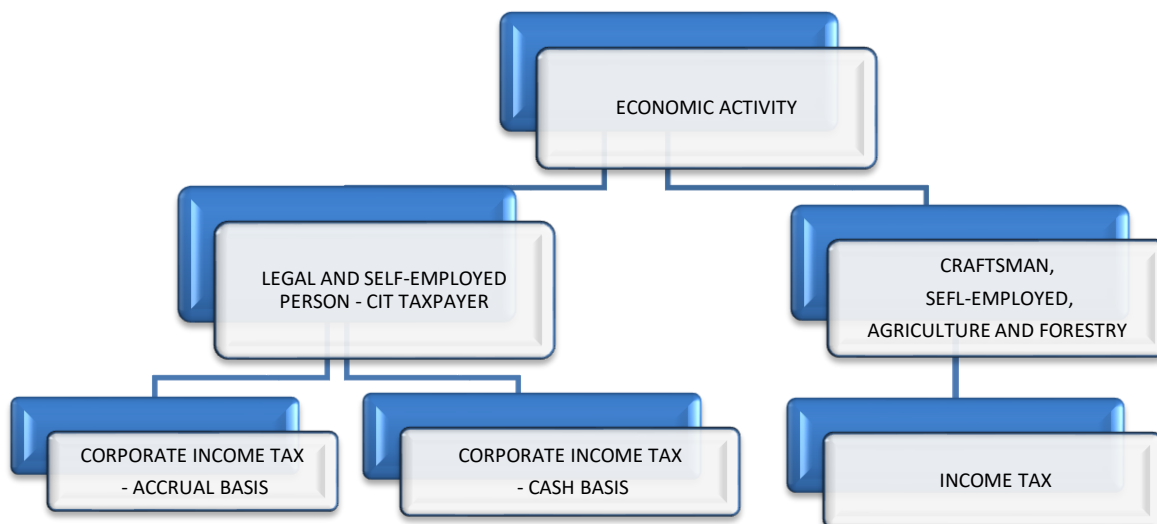
*Table 1.: Taxpayers by size (Author according to Accounting Act and Directive)*

Description	Accounting Act in Croatia in HRK			Directive 2013/34/EU in EUR		
	Total assets	Revenue	Employees	Total assets	Revenue	Employees
Micro	≤2,600,000	≤5,200,000	<10	≤350,000	≤700,000	≤10
Small	≤30,000,000	≤60,000,000	<50	≤4,000,000	≤8,000,000	<50
Medium	≤150,000,000	≤300,000,000	<250	≤20,000,000	≤40,000,000	<250
Large	≥150,000,000	≥300,000,000	≥250	≥20,000,000	≥40,000,000	≥250

The subject of this paper is CIT taxpayers that are classified as micro entities and meet the conditions of total turnover up to HRK 3,000,000.00. Micro entity is considered to be any entity engaged in an economic activity, irrespective of its legal form. This includes, in particular, a limited liability company, joint stock company, public company or other CIT taxpayer like self-employed persons and family businesses engaged in craft or other activities, and partnerships or associations regularly engaged in an economic activity. The most micro companies are company with a few employees or without employees. According of the FINA information in 2016. it was 30,1% companies without any employees. In the most of that company's owner is a manager and employees. That companies have a limited finance resource and need to take care about the expensive. The main aim of this paper is to examine how the corporate income tax payers managed to reconcile its accounting books of accrual basis and took advantage of the ability to pay corporate income tax to the cash basis. The paper consists of five (5) parts, including the introduction and the conclusion.

## 2. LEGAL FRAMEWORK

In Croatia existing two types of entrepreneurs, taxpayer on tax on income such as self-employed, crafts, taxpayer on tax on income, and taxpayer on tax on corporate income tax such as limited liabilities company, shareholder company and so on (Picture 1). In the CIT taxpayer can included taxpayer on income who voluntary decided to be CIT taxpayer or on legal demand if meet legal conditions. Independent activities of taxpayer on income tax, crafts or freelancers are defined in the Income Tax Act (ITA). Income is defined as the difference between business receipts and business expenses incurred in the tax period. The IT taxpayer run simple accounting business books (Art.34. p. 2 ITA) such us the book of receipts and expenditures, the list of long-term assets, the book of turnover and the records of claims and liabilities. IT taxpayer fulfil the tax return on DOH form to the end of February every year. CIT taxpayers conducting their business books and prepare financial statements according to the accounting standards and Corporate Income Tax Act. CIT taxpayer can choose between the accrual model or cash model if they satisfy legal condition.



Picture 1.: Groups of Taxpayers (Author)

### 2.1. Accounting

In the whole EU, micro and small entrepreneur is very important factor of EU economy. The Accounting Directives are framework for all EU country. From 2005., when was implement

term micro entrepreneurs is start to discuss about adopt the simpler rules of financial reporting for micro and small companies. The micro and small companies use the accounting services for the bookkeeping and preparing the financial statement, what is increasing the cost. For that reason, accounting was recognised as one of the key areas where it is possible to reduce the administrative costs, especially for SME companies (European Parliament & Council of the European Union, 2012). The new directive called 'Directive 2013/34/EU is based on the "think small first" principle. In order to avoid disproportionate administrative burdens on micro and small entities, Member states should be allowed to exempt micro-entities from certain obligations applying to small undertakings that would impose excessive administrative burdens on them. National Law need to find the simplified way for micro-entities to keep records of business transactions and financial position. Member States should take into account the specific conditions and needs of their own markets when making a permit micro-companies to simplify the financial statement which is giving the true and fair view. In Croatia, CIT taxpayers (micro, small, medium or large) maintain their accounting books according to the Accounting Act (2016) and accounting standards, Croatian or International. Accounting Act is harmonized with Directive 2013/34/EU and other EU regulations. The micro and SMEs use the Croatian Financial Reporting Standards. Accounting Standards have prescribed bookkeeping according to the accrual basis as well as the preparation of financial statements, except cash flow statements. The accrual basis requires companies to report income and expenses as they are incurred, no matter when they receive the money. In Croatia, for all CIT taxpayers double-entry bookkeeping on the accrual method is compulsory. Croatian Standards is a little bit a simplify in order of IFRS, but it is not enough for micro entity. Micro and small taxpayer in order to medium-size and large taxpayer, do not need to have audit, they do not need to prepare annual report. They need to prepare for the set of financial statement only balance sheet, profit and loss statement and notes. That simplification for micro and small taxpayers are exist in the Accounting Act, but it is not enough. Croatia have a space to simplify bookkeeping and preparing the financial report, especially for micro companies. The Commission is obligated to submit its report to Parliament on the savings and real reduction in the administrative burden of micro entities in the EU by the end of July 2018.

## **2.2. Corporate income tax**

CIT taxpayers need to books the business activities according to the Accounting Act or according to the accrual basis, but they can choose to pay the CIT on accrual basis or cash basis from 2017. year. Until, 2017, corporate income tax is payed only according to accrual basis. In 2017, CIT taxpayers have to opportunity to use cash basis for CIT payments, if they satisfied legal conditions. Only CIT taxpayer which has turnover to the HRK 3,000,000.00 and if is in VAT system according to the cash basis can pay the CIT according to the cash basis. Cash basis CIT taxpayer has the obligation to run the book according to accrual accounting and calculated the CIT tax on prescribed form PD -NN. The CIT tax base is the profit that is determined according to the accounting regulations as the difference between income and expense prior to the calculation of tax on profits, increased and reduced by the provisions of the Corporate Income Tax Act. When determining the CIT tax base, accrual or cash basis, is based on data from the profit and loss account. Data taken from the P&L statement, total revenue, total expensive and profit or loss are derived from accrual basis accounting records. CIT taxpayers on cash basis, need to adopt accounting information from P&L statement, make some correction and transfer the tax base on cash basis and then increase or decrease for the items prescribes in CIT law. Also, they need to take care that include in the tax base some items after overdue payment deadline or realization. The main problem is that their need to take care about some items for a few years until they do not finish in tax form. The basic rule for CIT taxpayer is to avoiding double taxation or avoiding a double deduction of the tax base.



### 2.3. EU practice

Directive 2013/34/EU allow to the country to simplify booking and financial reporting for SMEs segment, especially for micro segment. In the research (Mamić- Sačer, Dečman, Sever, 2015) of 271 companies in Croatia confirm prove that Croatian SMEs consider that „accounting regulation for micro entities (a few to 10 employees) should be significantly simplified, 37% of the respondents generally agree with the above statement, while 31% of them fully support it. Most of the respondents (71%) believe that the exclusion from the public disclosure of financial statements, as well as reducing the requirement to disclose information in the notes will influence the cost reduction. More than 25% of the respondents consider it would significantly reduce the cost. The results confirmed that this simplification results in the cost reduction of preparing the financial statements but does not significantly decrease the quality of the information used for decision-making„. Accounting guide for SMEs (EY, 2015) is study conducted by EY on behalf of the European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and SME's. The main aim of that study was to help SMEs to develop accounting practices that reduce the administrative burden while maintaining the information value for users. The final countries selected for that study include: Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, The Czech Republic, The Netherlands, The UK and Turkey. Changes to national accounting requirements in Member States after 31 January, 2013 were not considered for the purpose of the study.

Conclusion of that study concerning to the micro entities are (EY, 2015 p.13-17):

- „As far as tax accounting is concerned, the majority of countries do not see differences between the different legal entity types. Tax accounting is often produced based on the existing accounting systems used to prepare the external financial statements. Adjustments for tax purposes to the accounting result are documented on the tax declaration forms but not integrated in the accounting
- The majority of countries require accounting records to be produced on an accrual basis or provide a choice between cash and accrual basis when it relates to Type 2 – Micro-sized entities (0-2 employees).
- In case of Type 2 – Micro-sized entities, transactions can be recorded by means of a single-entry bookkeeping. For all other type and size combinations, double entry is the most recurring legal requirement
- the users of Micro-sized entities' financial statements indicate that they do not need the notes to the financial statements.
- accounting on an accrual basis is usually a legal requirement for all Type 1 entities while cash basis can be used for Type 2 Micro-sized entities. However, users and preparers prefer accrual accounting as a basis for the preparation of the financial statements for all legal entity types and sizes.
- cash based accounting / accrual based accounting for Type 1 Micro -sized entities (3 -9 employees): In 56% of the countries selected (i.e. Bulgaria, Croatia, The Czech Republic, Estonia, France, Greece, Italy, Norway, Portugal, Romania, Slovakia, Spain, The Netherlands and Turkey) cash based accounting is not allowed for this type of entities and accrual based accounting should be applied. For certain legal forms within the Type 1 category the legislation in The UK and Ireland does not include specific provisions on the accounting principles to be applied.
- in 64% of the countries selected (i.e. Croatia, The Czech Republic, Denmark, Estonia, France, Germany, Hungary, Lithuania, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden and Turkey) specific obligations are expressly indicated in the national

legislations, regulations and/or recommendations stating that a double entry bookkeeping should be maintained for this type of entity. Exceptions exist based on legal form (i.e. The UK) or based on the combination of size and legal form (i.e. Belgium and Italy). In Austria, Bulgaria, Greece, Ireland, Spain and The Netherlands management decides which bookkeeping method should be applied. “

In Irish law form 2017 is implements optional Micro Company Regime (KPMG 2017), relating to the annual financial statements and reports of companies.

### **3. THE GOALS, BASIS, AND HYPOTHESIS OF THE RESEARCH**

The main aim of this paper is to examine how the corporate income tax payers managed to reconcile its accounting books of accrual basis and took advantage of the ability to pay corporate income tax to the cash basis. To confirm this aim it has been examined relationship between the size, CIT model and the main characteristic of cash CIT model.

H1= It is assumed that exist statistically significant relationship between the size, CIT model and the main characteristic of cash CIT model

H2= Accrual basis accounting is the main reason why more entrepreneurs do not use the benefit of cash CIT model

The research described in this paper is based on information obtained from the questionnaire to the accountant and directors of small and micro entrepreneurs. The questionnaire was send to 2.000 companies and 605 or 30.25% replay on them and it is the part of previous research (Roška, 2017). For the statistical analysis, this paper uses analysis stemming from chi-square tests and correlation coefficients to examine interdependencies. The statistical study used the software package SPSS 21.

### **4. RESULTS OF RESEARCH**

Total respond on questionnaire was 605 companies. Small companies were 8,60% and 91,40% were micro companies.

From the previous research where we established that tax form for cash basis model is too complicated (Roška, 2017, p.708) relevant result are:

- There is a significant association between payments model of CIT and complexity of the cash basis model for the CIT taxpayer ( $X^2 > 458.002, p < .001$ ). Figures shows that 42 % CIT taxpayers thing that is cash basis system is too complicated, together with 21,8% which things that they need a more people in accounting, and 17.9% CIT taxpayer things that they need a more people and better informatic support for using the cash basis method for payment of CIT
- CIT models and Cash flow report like data sources for fill out tax forms is  $r = .502$ . The significant positive correlation between the CIT models and using the Cash flow report like data sources for tax forms shows that 28.1% taxpayer thought that is good sources, but 100% of taxpayer who use cash basis model.

Correlation results presented in Table 2 are between size (Q1), CIT tax models (Q6) and the main characteristic of cash CIT model (Q 16).

We found positive statistically significant ( $p < .01$ ) correlations between:

- CIT models and the main characteristic of CIT cash model is  $r = .721$ . The significant positive correlation between the CIT models and main characteristic of CIT cash model. Complexity of accrual accounting of the CIT cash model show that 49.96% the accrual CIT taxpayer thought that the main reason why they did not choose the cash CIT model.

We found negative statistically significant ( $p < .01$ ) correlations between size and CIT tax model and the main characteristic of CIT cash model:

- Size and CIT models is  $r = -.884$ . The negative significant correlation between size and the CIT models 89.3 % of taxpayer did not use the cash CIT model.
- Size and main characteristic of CIT cash model is  $r = -.638$  The negative significant correlation between size and the main characteristic of CIT cash model shows that 55.7% taxpayer thought that accrual based accounting is the main obstacle for cash SIT model.

We can conclude that hypothesis 1 is accepted.

Table 2: Correlation between the size, CIT models and the main characteristic of cash CIT model (Author)

		Q 1	Q 6	Q 16
Q 1	Pearson Correlation	1	-,884**	-,638**
	Sig. (2-tailed)		,000	,000
	N	605	605	605
Q 6	Pearson Correlation	-,884**	1	,721**
	Sig. (2-tailed)	,000		,000
	N	605	605	605
Q 16	Pearson Correlation	-,638**	,721**	1
	Sig. (2-tailed)	,000	,000	
	N	605	605	605

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

The main question of this research what is the main obstacles for CIT taxpayer to choose cash CIT model. The respondents could choose between accounting on accrual basis, too many manual work or too complicated rules for PD NN. Based on the results, showed in Table 3, there is a significant association between CIT model and the main characteristic of CIT cash model ( $\chi^2 = 594.730, p < .001$ ).

Table 3: Chi-square Test between CIT model (Q6) and the main characteristic of Cash CIT model (Q16) (Author)

			Q 16			
			ACCOUNTING	A LOT OF MANUAL WORK	TOO COMPLICATED PD NN	TOTAL
Q 6	CASH CIT MODEL	Count	65	0	0	65
		% of Total	10,7%	,0%	,0%	10,7%
	ACCRUAL CIT MODEL	Count	272	83	185	540
		% of Total	44,96%	13,7%	30,6%	89,3%
Total		Count	337	83	185	605
		% of Total	55,70%	13,7%	30,6%	100,0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	594,730 <sup>a</sup>	3	,000

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,09

Figures shows that 55,7 % CIT taxpayers thing that the accounting on accrual basis is the main reason way the more taxpayer do not choose cash CIT model. Some of them, 30,6 % thing that PD NN form rules are not clear and for that reason they cannot predict the benefit of cash model. This statement is not surprising, because is only first year of application. When we analysed the main characteristic of cash CIT model, such as accrual accounting for cash base payment, unclear rules for cash CIT model or additional manual work, it is obviously way only 10,7% CIT taxpayer in this questionnaire took this tax benefit. On the question if cash CIT taxpayer need to have possibilities to run booking according to cash accounting, results have showed there is a significant association between size and possibilities of cash accounting ( $X^2 > = 222.934, p < .001$ ). Figures shows that 62,8% CIT taxpayers do not have opinion about running the book on cash accounting basis, because they do not thing is it possible to change the accounting rules. Only 20,3% CIT taxpayer thing that government need to allow some of CIT taxpayer to do bookkeeping according to cash accounting. Figures shows that 47,9% CIT taxpayers think that is not necessary that all entrepreneurs have the possibility to pay CIT on cash basis, but 31,6% thing that is good option. We can conclude that hypothesis 2 is accepted that accrual accounting base is the main obstacle why more entrepreneurs do not use benefit of cash CIT model under the condition of general illiquidity.

## 5. CONCLUSION

The basis condition to use the tax benefit to pay CIT on cash base is total revenue on accrual basis up to HRK 3,000,000 and payment of VAT on cash basis. That means only micro or one-part small companies can fulfil that condition. In Croatia we have 98,5 % of micro and small entrepreneurs, but only 0,22% choose to use this tax benefit and pay the CIT on cash basis. In this research of 605 companies it was 10,7% cash CIT taxpayer. The research shows that 55,7% of entrepreneur's thing that the main reason why a more entrepreneurs do not use the cash CIT model is accrual based accounting. Because it is only first year of application of CIT cash model, the rules of cash CIT model are not clear for 39,34% taxpayer. The basic idea of implementation of cash CIT model is to simplifications to transfer from income taxpayer to corporate income taxpayer and also to decrease administrative operating costs for micro and small companies. The most of them are self-employed or have only a few employees and have an external bookkeeping service. The complexity of accrual accounting and complexity of cash based CIT model bring to additional cost for companies. The government need to consider implementation of cash accounting for CIT cash model taxpayer, or at least for cash CIT taxpayer with maximum 3 to 5 employees. The micro sector is becoming more and more important for the economy in the Republic of Croatia as well as around the world. At times of illiquidity, the financial and political crisis segment micro and SMEs provides economic stability.

The tax rate of 12 % and simplify procedure of accounting will bring to Croatia CIT taxpayer to better use of cash CIT model and on the end the better business result.

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## MANDATORY PROFESSIONAL LIABILITY INSURANCE OF CROATIAN LAW FIRMS

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### **ABSTRACT**

*The purpose of this paper is to provide a comprehensive presentation of legislative regulation provided by the Advocacy Act, practical problems, doctrinal discrepancies and possible solutions in regard mandatory professional liability insurance of the Croatian law firms established as limited liability companies. The paper provides analysis of the respective regulation, its practical application and repercussions. Findings indicate certain inconsistency in the analysed regulation. Regulation requires all the Croatian attorneys to have professional liability insurance in amount not less than therein stipulated. Regulation also asks for mandatory professional liability insurance of the Croatian law firms established as limited liability companies in an amount considerably higher than mandatory minimum amount of the professional liability insurance of an individual attorney. In the current practice, insurance of both a law firm established as a limited liability company and its lawyers has been asked for. Such interpretation of the said regulation causes considerable legal uncertainty. In most cases, it either diminishes one of the main characteristics of the limited liability company under Croatian law i.e. to be a legal subject separate from its founders, or has no legal basis at all. Analysed legal uncertainty presents a system risk for Croatian lawyers, their clients and insurers, demoting competitiveness of the entrepreneurial environment in the Republic of Croatia. This paper pleads for, and provides support to, elimination of such negative status.*

**Keywords:** *Advocacy Act, Croatia, law firms, limited liability company, mandatory insurance*

### **1. INTRODUCTION**

The Advocacy Act is a core regulation of advocacy in the Republic of Croatia. Among other, it requires from all the lawyers practicing law in the Republic of Croatia to maintain mandatory professional liability insurance in regard any damage an attorney may cause to the third party.

#### **1.1. Drammatis Personae**

The Advocacy Act differentiates several categories of subjects in such insurance. In Article 44 paragraph 1 it introduces:

- a) attorneys as sole practitioners,
- b) incorporated partnerships (in Croatian: "javna trgovačka društva")
- c) members of the incorporated partnerships,
- d) attorneys employed with the incorporated partnerships,
- e) law firms established in form of the limited liability companies,
- f) attorneys employed with limited liability companies,

in the Article 44 paragraph 12:

- g) the joint law offices (in Croatian: "zajednički odvjetnički uredi"),

and in the Article 44 paragraph 14:

- h) the members of the law firms established in form of the limited liability companies.

## **1.2. On the Stage**

The abovementioned article of the Advocacy Act makes certain distinction between the persons who are parties to insurance agreements, and insured persons themselves, where applicable. In case of the attorneys as sole practitioners or members of joint law offices (which have no legal personality) there is no difference between those persons – the sole practitioners provide required insurance directly entering into insurance agreement with the insurers. Incorporated partnerships enter into insurance agreements only as contrahents to such agreements, arranging required insurance on behalf of their members and attorneys employed therein. The law firms established in form of the limited liability company, in this context, have double function, acting as both insured persons and contrahents to such agreements, arranging required insurance on behalf of the attorneys employed with the law firm. The members (i.e. the stake holders) of the law firms established in form of the limited liability company are liable for obligations of the law firm in case that, and as long as, the law firm itself has not been duly insured.

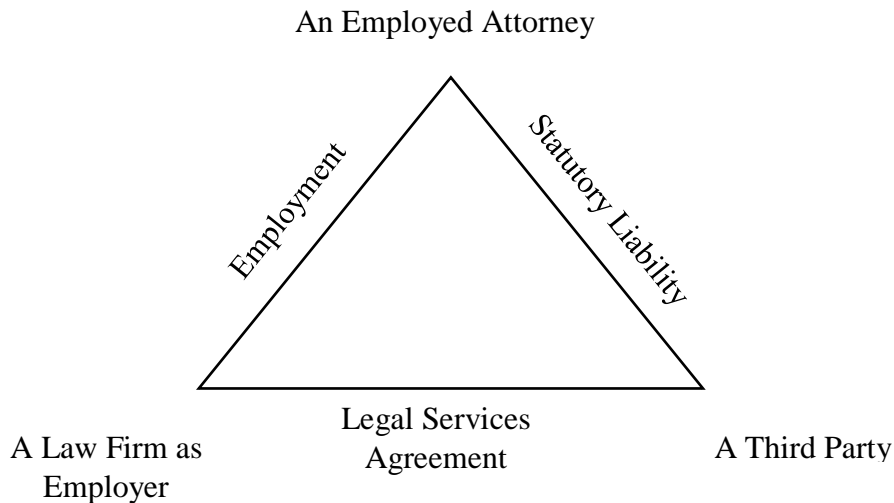
## **2. CURRENT STATUS**

We believe that the Advocacy Act and pertaining practice set several dubieties of various significance related to the professional liability insurance of attorneys and law firms.

### **2.1. Professional Liability of the Employed Attorneys**

The Advocacy Act, Article 44, requires the professional liability insurance of, among other, the attorneys employed with the law firms: “An attorney must be insured against liability for the damage which attorney may cause to third parties while practicing law. The liability insurance agreement for attorneys who are members of an incorporated partnership as well as for the attorneys who work in such a company, executes the company. The agreement on the insurance for a law firm established in form of the limited liability company, as well as for the attorneys who work in such a company, concludes the company.”. The practice of the Croatian Bar Association sticks to the grammatical interpretation of the Advocacy Act, thus requiring a professional liability insurance to be established and maintained in regard the lawyers employed in the law firms (e.g. as per ruling of the Croatian Bar Association, DS-62/2017, of 27 September 2017). We argue that above presented set of rules on the mandatory insurance of the attorneys employed with the law firms, as well as the said practice, form a framework of uncertainty potentially harmful for Croatian lawyers employed with the law firms. We do not dispute such grammatical interpretation. Nevertheless, we insist on its teleological assessment, putting a simple question in that regard: Why? Why should both a law firm and its employee (regardlessly being an attorney) have to be insured from the professional liability towards third parties? Could a law firm’s employee be professionally liable towards a third party in regard employment at all? If no: there is no reason for the professional liability insurance of an employee. If yes: what may be the legal basis for such professional liability?

*Figure following on the next page*



*Figure 1: The Scheme of the Insurance Subjects and the Bases for their Relations*

In the scheme above we present graphically our, below analysed, understanding of the subjects of the respective insurance and legal bases of their relations in that regard.

#### *2.1.1. Professional Liability of an Employed Attorney Towards the Third Party*

According to the Civil Obligations Act, Article 1061 paragraph 1, primarily: “The employer shall be liable for the damage caused to a third party during the work, or in relation with the work, of an employee employed with the employer at the time the damage has been caused, unless it has been proved that there are grounds for exclusion of liability of the employee.“. Civil Obligations Act, Article 1061 paragraph 2 nevertheless stipulates: “An injured party shall also have a right to request a redress of the damage directly from the employee if the employee has caused the damage intentionally.”. Therefore, according to the Croatian law, there may be established a liability of an employed attorney towards the client or other third party related to the employment of such an attorney. Since an attorney employed with the law firm obviously may be liable for the employment related damage to the third party, is such liability a professional liability? Any and every employee in the Republic of Croatia, including every attorney employed with a law firm, has been primarily protected by the strict rules of the Labour Act. The Labour Act in its section titled: “The Basic Employment Related Rights and Duties”, Article 7 paragraph 1 stipulates general obligation of an employee as follows: “...the employee shall be obliged to perform the work following the instructions provided by the employer in line with the nature and type of work”. We shall agree that the employment is poor model to engage a lawyer in a law firm, and that lawyer should always act and be treated as a professional, not as a subject strictly subordinated to the employer. Nevertheless, such is a model envisaged by the Advocacy Act. In the other hand, the Croatian law has no comprehensive definition of a “professional”. What little usage of that term might be found, is related to the taxation of attorneys acting as individual entrepreneurs (the Income Tax Act, Article 29 paragraph 2 subparagraph 1) and the level of due diligence in carrying business activities of, among other, attorneys (Gorenc, 2005, p. 22). Both sources relate professional activity to entrepreneurship, performing of business activities, i.e. providing of legal counsel. But does, legally, an employed attorney, or the law firm as employer, provide the legal counsel to the client? In practice, it appears to be rather debatable. Let me share a small sample of personal experiences on that issue. There are even doubts over who should be granted a power-of-attorney (PoA): a law firm or the attorneys employed therewith. Short of a clear answer, some judges in civil procedures accept a PoA issued in favour of a law firm, some insist that a PoA may be issued to the physical persons only, while allowing for simple pointing in a PoA



to all the attorneys of the respective law firm in general, without naming each of them, while some require that all the attorneys which will represent the client are to be specified in the PoA. Next iteration of the same problem occurs upon specification in the PoA of some or all the attorneys employed with the law firm at the moment the PoA has been issued. What is the legal effect of a subsequent employment of a new attorney? If all the attorneys who are to act upon the PoA should be specified therein, new or amended PoA should be issued. We often have witnessed ridiculous practice of adding names of the newly employed attorneys, by said attorneys, before the presiding judge. What should be legal effect of such a unilateral action in regard PoA form issued by the client, we cannot imagine. If we accept the idea that PoA relates to specific attorneys employed with the law firm but not the law firm, does termination of the employment of a certain lawyer indicated in PoA have any statutory effect toward PoA itself? Should the claim over malpractice in regard some PoA be raised against some or all the attorneys indicated therein, etc. The Advocacy Act is of little help in this matter. In Article 27 paragraph 3 it states that: "The Companies Act shall apply to law firms *mutatis mutandis*, unless otherwise provided by the provisions of this Act." In Article 4 paragraph 1 the same law stipulates: "Attorneys may conduct their legal practice individually, within a joint legal office or a law firm in accordance with the provisions of this Act.". That strongly indicates that law firms, under the Advocacy Act, are only a form of attorneyship, which (attorneyship) itself lays solely with attorneys, not the law firms. Such idea would, nevertheless, be fine if law firms have had no legal personality. Since law firms have legal personality and do act as such, entering agreements, suing and being sued, issuing invoices and receiving monies, employing attorneys etc., the Advocacy Act's inconsistent concept of utilitarian mixing of professional relationship and employment, status and rights of law firms as legal persons registered and authorized to practice law with the status and rights of the physical persons, their employees (although attorneys) etc., causes an unacceptable, both dogmatic and practical, conundrum. On the contrary, the Advocacy Act Article 33 paragraph 1 specifically indicates that law firms themselves render legal services: "For the legal services rendered to the clients, law firms are responsible in accordance with the general rules on liability for the damage". We may only assume that is the reason for imposing of the mandatory professional liability in regard law firms (so far only those established as limited liability companies) under above quoted Advocacy Act Article 44 paragraph 1. Such construct would be in full accord with the General Conditions for the Insurance of the Attorneys issued by the Croatian Insurance Bureau as an umbrella organisation of the Croatian insurers ("the General Conditions") which, in Article 1, allow for legal persons to be both the contrahents to agreement on the professional liability insurance, as well as the person insured upon such an agreement, in the Article 14 paragraph 1 considering, vice versa, such insurance always being related to professional activities of attorneys, their apprentices and other staff. Therefore, we strongly believe, and in order to overcome above presented doubts equally support the attitude, that the law firms and not their employees render legal counsel. Furthermore, it follows that only the law firms and not their employees perform professional activity. Therefore, legally, only the law firms and not their employees may be subject to the professional liability. In conclusion, there is no legal reason for the mandatory insurance in regard the professional liability of an employed attorney towards a third party.

### *2.1.2. Professional Liability of an Employed Attorney Towards the Employer*

Ratio of the mandatory professional liability insurance of an attorney employed with the law firm can neither be related to the liability of such attorney towards the employer. Such statement follows primarily from the above indicated statutory relation of the mandatory professional liability insurance of an attorney employed with the law firm towards a third party, under Advocacy Act Article 44 paragraph 1. We believe that in such a legal constellation, the

employer may not be considered as a third party. Furthermore, the General Conditions in its Introductory Regulations define the third party as “a person who is not a party to the insurance agreement, i.e. who is neither a person whose liability has not been covered by means of the insurance nor an employee of the insured person”, thus disqualifying both the employer and the employee as third parties. The presented attitude reflects dogmatic attributes of respective insurance agreement, since the injured party “is not the party to the agreement (“the third party”)...” (Pavić, 2009, p. 75). Neither the rules of the general civil obligations, including the above quoted Civil Obligations Act, Article 1061 paragraph 2, provide for such a situation. Those rules provide that only “...injured third party is authorised to request the redress of the damage directly from the employee...”. Such “Regulation, therefore, does not stipulate the liability of the employee towards the employer for the damage caused to the employer under employment or related to it...” (Gorenc, 2005, p. 1640). Since an employer is second, not the third, party, that rule is not applicable in the here analysed situation. The statutory liability of an attorney employed with the law firm to the employer may be established upon the Labour Act only, Article 107 paragraph 1: “The worker, who, either intentionally or due to gross negligence, causes the employer to suffer damage at the workplace or in relation to the work, shall be obliged to indemnify the employer for such damage.” Therefore, an employed attorney, even in that regard, may be not considered a professional, but an ordinary employee only. Support to such a thesis is being provided by the General Conditions which, in their article 27 in regard the due diligence standard for gross negligence, stipulate “the standard of an ordinary person”, not professional (Milošević, 2015, p. 11). While we agree that, according to the Civil Obligations Act, Article 10, the higher standard should be applied in relations between the client and its legal counsel, let us reiterate that relationship between the law firm and an attorney employed in that firm has been regulated primarily by the Labour Act, and considered an employment relation, not a civil obligation.

## **2.2. Professional Liability of the Incorporated Partnerships**

The Advocacy Act does not impose the mandatory insurance of the incorporated partnership itself, although said partnership has a legal personality of its own distinguished from its members or stakeholders (the Companies Act, Article 4), acquires rights and duties and may be sued before the court (the Companies Act, Article 5), being liable to its creditors with all its property (the Companies Act, Article 9). Thus, this legal solution does not provide for the mandatory insurance of the law firms established in form of the incorporated partnerships, at all, although they are companies, with all the attributes of a company envisaged by the Companies Act, including registration for exercising attorneyship. Such concept may result in potentially negative consequences for the clients and members of such companies, as well as for the attorneys employed with such companies. E.g. two members of a law firm incorporated as general partnership are to, currently, provide for only 1.6 million HRK of mandatory insurance. If no private property of such members suitable and sufficient for indemnification of the injured client of such company may be found, it appears that engagement of a law firm incorporated as a limited liability company may prove to be safer option for the client: regardless of the limited liability of the latter, it has a manifold higher mandatory insurance of 9 million HRK. Lack of the higher insurance related to the law firms established in form of incorporated partnerships may also increase the risk for the members of the law firms incorporated as general partnerships. Such risk may be easily overcome by means of a voluntary insurance at the certain higher amount. Nevertheless, this concept which asks for no mandatory professional insurance of the law firms incorporated as general partnerships may be somewhat deceiving for the client, while the law firms incorporated as general partnerships should be aware of its potential reflection to their competitiveness.

Furthermore, due to the here presented legal uncertainties, such concept rises risk for the lawyers who are just employed with such a company and still may be considered subjects to the indemnity claims of the company clients, while the law firm as their employer itself does not have to have any insurance from the professional liability.

### **2.3. Professional Liability of the Members of Incorporated Partnerships**

There is also an issue over the Advocacy Act stipulations on the mandatory professional insurance of the members of law firms incorporated as general partnerships. If the law firm is one to be professionally liable as argued in this paper, why should the members of law firms incorporated as general partnerships be also professionally liable? They surely are solidary liable for obligations of the law firm under law, as above. Nevertheless, the liability of its members is statutory, not professional. Therefore, we believe there is little sense to insist on "professional" liability of the members of such companies and respective insurance as well.

### **2.4. Insurance of the Joint Law Offices**

Status of the joint law offices itself is of lesser interest to this analysis, but supports the thesis of inconsistency of the Advocacy Act. E.g., joint law office is not an incorporated entity - it has no legal personality. It may carry neither rights nor duties. Despite such a status, according to the Advocacy Act Article 44 paragraph 12, joint law offices have duty to deliver the proof "of insurance" upon a request from the Croatian Bar Association. Failure to deliver results in its temporary ban, until delivered as requested.

### **2.5. Liability of the Stakeholders in the Law Firms Established as Limited Liability Companies**

Under the Companies Act, Article 10 paragraph 2, members (i.e. the stake holders) of the law firms established in form of the limited liability companies, as a rule, may not be liable for the company's obligations. The Companies Act provides for exceptions to that rule, but only if under, *expressis verbis*, "that act". Such wording brings the Advocacy Act into collision with the Companies Act as *lex generalis*, since the former introduces a specific deviation from the rule above, stipulating that said members may be liable in case that, and as long as, the law firm itself was not duly insured. Such a discrepancy we deem to be minor, especially due to the primacy of the Advocacy Act as *lex specialis* over the Companies Act, as *lex generalis*. Nevertheless it should be timely solved.

## **3. THE PROPOSALS**

The Advocacy Act shows, at least, several structural inconsistencies, as above. We believe that they evolved through some of the 12 partial, legislative or equal, adaptations of the said law to new realities, including those introduced by means of the Companies Act, opening of the local markets, integration into European Union etc. Proper lasting solution for those inconsistencies would be a comprehensive modernisation of the said law. Although supportive of such an action, we are aware that it assumes complex, demanding and rather sensible process which should take into consideration many social, legal, economic and other aspects and reflections of attorneyship. Therefore, an effort to resolve those inconsistencies on occasion of the next envisaged partial changes of the Advocacy Act and the Companies Act may still suffice for the time being. We advocate transferring of the legal focus from attorneys to attorneyship. Such a change would eliminate above analysed contradictions and dubieties in regard status of law firms. E.g., the above quoted Advocacy Act Article 4 paragraph 1 may be redrafted as follows: "Attorneyship may be conducted via an individual practice, joint legal office or a law firm in accordance with the provisions of this Act.". If accepted, above proposed wording of Advocacy Act 1 would introduce a concept that the law firm and not attorneys employed therein, provides

legal counsel. In subsequence, professional responsibility and liability towards third parties related to the legal counsel would lay undoubtedly with the law firm only, not its employees. As demonstrated above, that would be much closer to dogmatic and legislative function of the law firm as a company and lessen potential liability of the attorneys employed with the law firms, having hardly any or no negative effect for the clients and other third parties. Such solution, which would not require the professional liability insurance of the attorneys employed with the incorporated law firms which, themselves, have to be insured, would be in full accord with some comparative regulations, including that of England and Wales. E.g. Solicitors Regulation Authority's Indemnity Insurance Rules of 2013, Article 4.3 do not require such an insurance of attorneys "...in respect of work done as an employee or whilst otherwise directly engaged in the practice of another firm (including without limitation as an appointed person), where that firm is required by these Rules to take out and maintain qualifying insurance." (Solicitors Regulation Authority, 2013). Such regulative solution had been maintained in previous iterations of that act (Belić, 2010, p. 267). Changes of the legal concept as proposed would also require deletion of the Advocacy Act Article 30 paragraph 1: "Rules of the general acts of the company must not make it questionable the independence and autonomy of attorneys in exercising of attorneyship.". Since the same law allows employment of attorneys, while the Labour Act, as above, in Article 7 paragraph 1 stipulates: "...the employee shall be obliged to perform the work following the instructions provided by the employer" i.e. a law firm, such proclaimed "independence and autonomy" are simply unattainable, not to mention its natural conflict with an, understandably, hierarchical structure of law firms as, among other, business structures. Advocacy Act Article 33 has been partially inconsistent with the here elaborated concept, while in most part it simply directs to application of other legal norms which have been applicable regardlessly. Therefore, said article may be deleted in full, as obsolete or superfluous, and in order to prevent possible subsequent conflicts of the Advocacy Act with other regulations. Further inconsistencies would be resolved by redrafting of the Advocacy Act Article 44 paragraph 1 reducing it to the first sentence, which proclaims a general obligation of all the attorneys to be insured. Considering law firms as attorneys, there is no need to stipulate additionally their obligation to get insured, as well as to ask for insurance of the employed attorneys and members of the incorporated partnerships, as argued above. Therefore, rest of the article may be deleted. Equally, any mention to the attorneys as employees and subjects of insurance may be dropped from the Advocacy Act Article 44 paragraph 13. Also, a discrepancy related to the duties of the joint law offices under Advocacy Act Article 44 paragraph 12 may be resolved imposing those duties against their members instead the joint law offices themselves. Finally, a limitation imposed by the Companies Act which does not allow for other laws to provide for deviations from the rules of the Companies Act on the liability of the company members appears to be obsolete, since being derogated by the Advocacy Act paragraph 14, and may be removed, replacing the wording on stipulation of the possible deviations from: „this law“, to „the law“ in general. Meanwhile, we believe that even an openly expressed stance of the Croatian Bar Association on above presented problems may effect in certain harmonisation of practice.

#### 4. CONCLUSION

The Advocacy Act provides an inconsistent legal frame for the mandatory professional liability insurance of the Croatian attorneys. E.g. Advocacy Act asks for no mandatory professional liability insurance of the incorporated general partnerships which are legal persons separate from its members, while imposing such insurance for attorneys employed in law firms incorporated as general partnership and limited liability companies, regardlessly, etc. The Advocacy Act rules on the professional liability insurance proves to be troublesome, in both theory and practice, for the law firms, members of the law firms incorporated as general

partnerships, the attorneys employed in incorporated law firms and others. Most of the analysed rules nowadays have neither practical nor theoretical ratio, and may be considered a reflection of earlier system which did not provide for incorporated forms of attorneyship. Currently applied hybrid solutions which, in practice, still relate attorneyship to the attorneys only, may be considered anachronous. While a comprehensive modernisation of the Advocacy Act would be more suitable in order to resolve abovementioned issues, some partial legislative actions have been proposed as an interim solution, while respective documented and publicized stance and practice which would anticipate such changes may also be appropriate in that regard.

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## CONCEPTUALIZATION AND VALIDATION OF CONNECTED REMOTE SERVICE AS A SECOND-ORDER FORMATIVE CONSTRUCT

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### ABSTRACT

*Based on an exploration of Connected Remote Services (CRS) by means of a qualitative study among German automotive customers, this study operationalizes the phenomenon. The definition of CRS as service innovation captures the special particularity of Connectedness as attribute, providing simultaneous connectivity to a service object (e.g. car), manufacturer (brand) and a service provider (dealer). The measurement model is conceptualized as a second-order formative construct with five first-order reflective constructs based on the results of the qualitative study, comprising Convenience, Connectedness, Comfort, Safety and Reliability. The scale validation was undertaken at the first- and second-order levels. The result confirms the five distinct first-order measurement models. At the second-order level, a multiple indicators and multiple causes (MIMIC) model was employed to assess the validity of the formative measurement model. The operationalization confirms the distinctness of the five CRS dimensions. Further, the results suggest that four of five dimensions significantly contribute to the overarching construct of Connected Remote Service, with Convenience and Safety being the most important contributors and Comfort to be shown as not significant. The confirmed concept of CRS will provide future research with a basis to explore different impacts of CRS use, e.g. in the context of technology acceptance and intentional customer behavior.*

**Keywords:** *Automotive, Connected Remote Service, Formative measurement model, MIMIC model*

### 1. INTRODUCTION

One general trend in the automotive industry is that the isolated focus on car-sales is replaced by a wider view, considering the initial car sale more of an enabler for beginning relationships with customers. Hence, car sales become the starting point for Relationship Management based on additional services expanding the traditional aftersales business, which today mainly consists of maintenance and repair services. (Confente, Russo, 2016, p. 59) At the same time, the need for service innovation has never been greater to ensure and expand market share and profits. One challenge to systematic service innovation is to combine technology, business, social, and customer needs in the creation process. (Spohrer, Maglio, 2008, p. 238) However, there is little research and knowledge on developing and designing new services. While customers are more and more competent in articulating their needs, and expressing their demands, the success of service innovation becomes more and more dependent on the use and integration of Information Technology and digitization of information processes into the service delivery system. (Bouwman et al., 2008, p. 3) This research aims to investigate the concept of Connected Remote Service in the automotive industry, using the multiple indicators, multiple causes model to operationalize formative variables. (Lee, Cadogan and Chamberlain 2013, p. 3) In recent years, scholars started recommending MIMIC model specification for formative measurement in SEM, (Henseler 2017, p. 183) especially if it is necessary to combine reflective and formative measurement. (Vinci 2010, p. 49) As per Diamantopoulos, (2011, p.349) “a two-construct SEM comprised of one formatively measured latent variable that impacts on a single reflectively measured latent variable is directly equivalent to a single-construct model comprising the same set of formative indicators (i.e., a MIMIC model)”

The main finding of this paper is the evaluation of the MIMIC model, describing the interrelationship between intended CRS dimensions and the overall CRS concept. It empirically evaluates the results from the conceptualization of CRS based on the prior conducted explorative qualitative research. These findings contribute to the development of a comprehensive research model to examine the impact of CRS on technology acceptance and behavioral intentions.

## **2. CONNECTED REMOTE SERVICE AS SERVICE INNOVATION**

Per Kotler and Bloom, (1984) a service is: "any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product." An indispensable characteristic of service is the necessity of the integration of an external factor (e.g. customer) into the process of service delivery which consists in the introduction of a service object by the consumer into the into the creation and delivery process of the service. (Hilke et al., 1989, p. 12) The novelty of a service innovation can consist of a new service, a new service portfolio and/or a new service process that individually or in combination defines a new way of creating value for the customer. (den Hertog et al., 2010, p. 494) Further, the authors concretely categorize possible dimensions and describe service innovation as "a new service experience or service solution that consists of one or several of the following dimensions: new service concept, new customer interaction, new value system/business partners, new revenue model, new organizational or technological service delivery system." Applying these criteria towards CRS it can be stated that it introduces a new way of customer interaction as well as new business partners, revenue models and technology based delivery system. Therefore, the definition of den Hertog et al. (2010) shall be the foundation for the further process of this research. Another important aspect of service innovation is described by Toivonen, Tuominen (2009, p. 893), who combine the mutual dependency of benefit creation. The authors state that „A service innovation [...] provides benefit to the organization that has developed it; the benefit usually derives from the added value that the renewal provides the customers." Inferentially, an important target of the introduction of service innovation is the creation of customer benefits.

As a subset of Mobile Services, recently Remote Services as an additional type of services has developed, describing a separate kind that can be delimited from traditional services because a technological interdependence occurs within the delivery process of the service. The definition of service innovation in conjunction with the definitions of Remote Services of Wunderlich et al. (2007, p. 7) and Connected Services of Hiraoka (2009, p. 16) are the foundation for the proposed definition of "Connected Remote Services" by the author of this paper: "Connected Remote Service is an innovative mobile Remote Service that enable customers to interact with the service object as well as the service provider by using mobile infrastructure independently of the spatial distance. This infrastructure enables the bidirectional exchange of information and the control of the service object via data channels."

CRS require several control elements. Information and Communication Technology (ICT) enables the service provider to access the service object as well as the customer's mobile device. The customer needs access to ICT that makes it possible to query data and to control and modify the service object. The service object must be able to feed the system via ICT with data of its own status. This enables the customer and the service provider to access the service object to monitor, to perform diagnostics and to control it. (Wunderlich et al., 2007, p. 13) Figure 1 describes the information and communication flows within the system architecture.

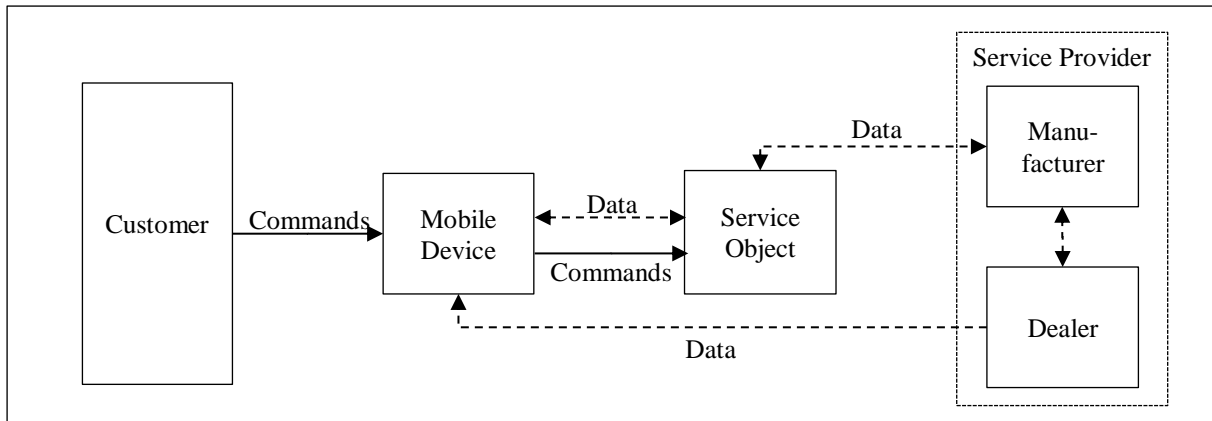


Figure 1: Schematic system-architecture overview of CRS (author's construction, extended from Wunderlich et al. 2007, p. 13)

### 3. RESEARCH DESIGN FOR MIMIC MODEL OF CONNECTED REMOTE SERVICE

#### 3.1. Exploration of Connected Remote Service

The conceptualization of CRS is based on an explorative, qualitative research approach using the method of Means-End Chain (MEC) analysis. The Means-End theory posits that linkages between product attributes consequences produced through consumption, and personal values of consumers underlie their decision-making processes. (Gutman, 1991, p. 143) Means are products or services, and ends are personal values considered important to consumers. Transferred to the context of this work, the mechanism of a Means-End Chain makes it possible to track back perceived consequences towards certain attributes or functions of a product or service. (Gutman, 1982, p. 60-62) Functions of CRS correspond to attributes that lead to attribute-specific consequences, which again lead to relevant values from the customers' perspective. The consequences, located in between attributes and values are of special interest for the identification of construct dimensions of CRS. For the survey, conducted during the period of April and May 2017 in Germany, customers of four different brands, were addressed while waiting at the service counter or in the waiting lounge of the dealership. As a prerequisite, the participants should have owned and used a version of CRS in the past 6 months. The participants are also referred to as users of CRS. The sample size for the written surveys in person consists of 18 participants. The identified consequences Convenience, Connectedness and Safety show the highest numbers of connections and thus substantially determine the construct of Connected Remote Services. The consequences Comfort and Reliability show lower levels of connections but still on a significant level and are also considered as dimensions for the further process of research. In summary, the explored concept of CRS consists of five dimensions, namely Convenience, Connectedness, Comfort, Safety and Reliability. Next, the identified dimensions are classified. Berry, Seiders and Grewal (2002), define Service Convenience as the customers' "time and effort perceptions [...] using a service", considering the specific context of necessary activities that customers carry out while using a service or performing a specific task. In the context of mobile services, Lin and Lu, (2015) reveal that Mobile Convenience directly and positively influences customer value and user satisfaction, because users may use a mobile phone to gather information and accomplish transactions at any time or place and obtain value based on convenience derived from the effective and timely transmission of information. The dimension of Convenience is therefore defined as follows: "Convenience describes the degree of simplification and increased promptness a user experiences by use of CRS." Wamba and Akter (2016) use the term perceived Connectivity describing it as the ability of a technology to link people to people or other objects. The second aspect of simultaneous connectedness towards a dealer is reflected in the definition developed by the author of this paper: "Connectedness describes the degree a customer feels connected to



a specific service object in terms of receiving or query information and sending commands to the service object and simultaneous connectedness towards the dealer.” In the automotive context, Hess (1924) defines comfort “as the transportation of an automobile passenger in so easy manner that the trip will be a pleasure and not a hardship.” Comfort can be perceived both positive and negative. In the negative case, the term discomfort is used. (Engeln, Vratil, 2008, p. 270) It is assumed that perceived increase of Comfort leads to an increase of system acceptance. (Arndt, 2011) In this work Comfort is defined as: “The degree the customer perceives physical relaxation (increased comfort) and the degree of stress avoidance (decreased discomfort) while driving the vehicle.” The dimension Safety covers the aspect that the use of CRS increases the customer’s perception of feeling secure. Within the context of automotive transport, Joewono and Kubota (2006) describe safety as “the actual degree of safety from accidents and the feeling of security resulting from that”. It comprises the aspects of safety from accidents, the presence of help, the avoidance of hazards as well as active safeguarding. Hence, in this paper Safety is defined as: “The subjective feeling of minimizing the individual risk of harming their physical integrity or to increase the probability to ensure their physical integrity.” According to (Bracke and Haller, 2011), Reliability is defined as the degree of increase of sustainability, e.g. by the avoidance of repair efforts by enhanced possibilities of monitoring the condition of the service object. The analysis of the mentions related to Reliability in the conducted survey, showed that it was often used relating to the increased Reliability of the vehicle itself. The dimension of Reliability is therefore defined as follows: “Reliability describes the degree of availability of the service object a user experiences by use of CRS.” At the consequence level, Perceived Reliability often was connected to Trust.

### **3.2. Connected Remote Service MIMIC model**

The evaluation requires the usage of a multiple indicators and multiple causes (MIMIC) model to identify the model due to the fact that a formative measurement model is naturally not identified. (Diamantopoulos & Winklhofer, 2001) To empirically test the qualitative results from the exploration of CRS, the MIMIC model as shown in Figure 2 is designed as follows: (1) dependent variable is Connected Remote Service (CRS) and (2) CRS dimensions form the independent variables Convenience (COV), Connectedness (CON), Comfort (CFT), Safety (STY) and Reliability (REL).

*Figure following on the next page*

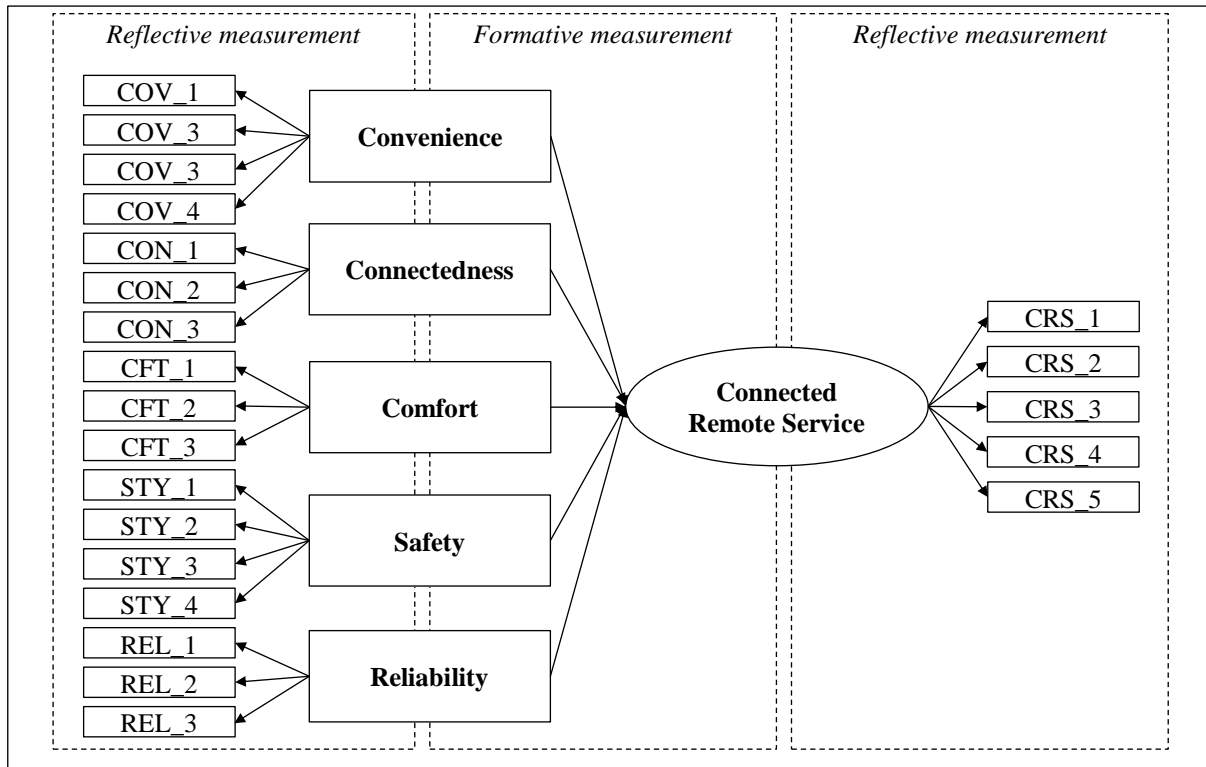


Figure 2: CRS MIMIC model. (Authors' illustration)

### 3.3. Research design and Pre-Test

A two-phase pre-test was conducted to assess validity of the indicators and to ensure that the wording of the questionnaire was clear. In the first step, an item-sort task among 11 selected CRS users was performed to assess the indicators addressed to the five CRS dimensions according to Anderson and Gerbing (1991). Based on the results, three out of 18 indicators were reformulated and improved regarding clearness. One of four indicators from the dimension Comfort was deleted from the questionnaire, because it didn't unambiguously load on one dimension. In the second step, the complete questionnaire was pre-tested in an online-survey setting. Thirty-four questionnaires were completed by the intended target group of active CRS users. Results showed that the developed questionnaire and survey design is suitable regarding the research targets.

### 3.4. Data collection and sampling

The target population of this study were customers from six car brands, required to be active CRS users. Data was collected through an online survey, conducted between October 1<sup>st</sup> and October 12<sup>th</sup>, 2017. The survey was addressed towards random customers, naming the scientific context of the research. Participants were instructed to answer all latent variables on a 5-point Likert scale. (1 = "strongly disagree", 5 = "strongly agree")

## 4. DATA ANALYSIS

### 4.1. Data screening

In total 701 responses were gained. From this sample, 266 questionnaires were defused from the population because the necessary requirement of active CRS use was not fulfilled, captured by filter-questions. After further proceeded data-cleaning of invalid responses, 331 samples were used for data analysis. Descriptive statistics were analyzed using SPSS 24.0. The demographic data included information on gender, age, model year, CRS application used, frequency of use and annual mileage. Gender split of the sample was 197 males (59.5%) and

134 females (40.5%). In terms of CRS application used, the breakdown was 28.7% Audi Connect, 25.4 BMW Connected Drive, 16.6% Volkswagen Car-Net, 11.5% Mercedes Me, 9.4% Opel OnStar and 8.4% Skoda Connect, indicating a largely even distribution. Respondents were divided into four levels of usage: seldom (41.4%), regularly (45.3%) and often (13.3%), whereas users that stated to never use CRS were excluded from evaluation. Data analysis included the determination of descriptive statistics, frequency distribution analysis as well as the assessment of reliability and validity. Structural Equation Modeling (SEM) was applied, using the software Smart-PLS 3.2.7. The Partial-Least-Squares (PLS) approach is particularly suitable for the consideration of both, reflective and formative measurement in one model.

#### 4.2. Evaluation of CRS MIMIC model

For the analysis of the CRS structure, the measurement model is specified as MIMIC model, combining reflective and formative measurement. The five dimensions of CRS are operationalized using reflective indicators. Simultaneously, the five dimensions, also referred to as factors define the CRS construct, using a formative approach of measurement. In the MIMIC measurement approach, it is necessary to specify a reflective measurement of the CRS construct. For this purpose, five indicators capture the phenomenon globally. To verify the measurement items, an Exploratory Factor Analysis (EFA) was performed. The five-factor model initially fits the data with total variance explained at 56.8%, which confirms an appropriate level of explanatory power. Test on Bartlett's sphericity neglects the hypothesis that the variables in the model are uncorrelated ( $\rho = 0.000$ ). The Kaiser–Meyer–Olkin (KMO) criterion rates the adequacy of the sample size for model assessment. The value of 0.902 confirms that the number of responses ( $n = 331$ ) is sufficient. The indicator pool initially contained 17 indicators addressed towards 5 factors. The factor analysis confirms that the factors Convenience, Connectedness, Comfort, Safety and Reliability represent independent constructs, as summarized in the pattern matrix. (See Table 2) Each factor of the CRS construct displays good levels of reliability. Indicator loadings are throughout above 0.7. Test of Corrected-item-total correlations (CITC) underpins the reliability of the measurement, since all values are above the threshold of 0.5. Significance is achieved by t-values clearly above 1.96 (two-tailed). Values of Cronbach's  $\alpha$  are above the threshold as per Nunally (1978, p. 245), who requires its value should be equal to or exceed 0.7. Average Variance Extracted (AVE) is sufficient for all factors as well as Composite Reliability (CR). Results are summarized in Table 1.

Table 1: Measurement validation of CRS dimensions

Dimension	ID	Loading	CITC	t-value	CA	CR	AVE
Convenience	COV_1	0.825	0.683	39.592	0.852	0.900	0.693
	COV_2	0.841	0.707	41.211			
	COV_3	0.842	0.702	46.836			
	COV_4	0.822	0.679	36.756			
Connectedness	CON_1	0.865	0.673	46.245	0.798	0.881	0.712
	CON_2	0.861	0.668	52.105			
	CON_3	0.804	0.589	27.010			
Comfort	CFT_1	0.848	0.655	42.957	0.799	0.882	0.714
	CFT_2	0.859	0.660	43.566			
	CFT_3	0.828	0.617	34.987			
Safety	STY_1	0.733	0.553	20.370	0.792	0.865	0.616
	STY_2	0.805	0.626	33.479			
	STY_3	0.795	0.628	29.566			
	STY_4	0.804	0.602	35.754			
Reliability	REL_1	0.827	0.628	40.441	0.806	0.886	0.721
	REL_2	0.841	0.636	46.411			
	REL_3	0.878	0.697	58.272			

As listed Table 2, the pattern matrix shows that all indicators have sufficient loadings towards their intended factors.

Table 2: Pattern Matrix

	Factor				
	1	2	3	4	5
COV_2	.798				
COV_1	.784				
COV_3	.757				
COV_4	.684		.102		
STY_3		.819			-.100
STY_2		.771			
STY_4		.563	.104		.109
STY_1		.561			
CFT_1			.808		
CFT_2			.749		
CFT_3			.723		
CON_2				.838	
CON_1				.794	
CON_3				.591	
REL_3					.889
REL_1					.706
REL_2	.104				.636

*Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization, Rotation converged in 6 iterations.*

Analysis of discriminant validity is conducted under use of the Fornell-Larcker criterion. According to this, discriminant validity is present, if the AVE of a factor is higher than the squared correlation of this construct with another construct. Diagonal elements presented the square roots of the average variance extracted. As shown in **Error! Reference source not found.** 3, all five factors are distinct from each other.

Table 3: Evaluation of discriminant validity of CRS dimensions

	COV	CON	CFT	STY	REL
<b>Convenience</b>	0.833				
<b>Connectedness</b>	0.537	0.844			
<b>Comfort</b>	0.455	0.393	0.845		
<b>Safety</b>	0.451	0.419	0.397	0.785	
<b>Reliability</b>	0.530	0.437	0.401	0.529	0.849

The evaluation of the reflective measured CRS overall concept as a prerequisite for the holistic analysis confirms the one-dimensionality of the phantom variable. Test of CITC, shows that all indicators are well above the threshold, confirming the reliability of the measurement. On the factor level, values for CA, AVE and CR also exceed the requirements. Table 4 summarizes the results.

Table 4: Measurement validation of CRS overall construct

Construct	ID	Loading	CITC	t-value	CA	CR	AVE
<b>CRS (phantom variable)</b>	CRS_1	0.750	0.604	27.084	0.818	0.874	0.580
	CRS_2	0.752	0.589	19.661			
	CRS_3	0.770	0.615	29.410			
	CRS_4	0.746	0.593	22.720			
	CRS_5	0.790	0.650	31.237			

Within the evaluation of the formative part of the model, first the VIF values are considered. The achieved values (all VIF values  $\leq 3.3$ ) confirm the absence of multicollinearity. Analysis of the path coefficients ( $\lambda$ ) shows that four out of five values clearly exceed the threshold of 0.1. Only Comfort ( $\lambda_3 = 0.065$ ) falls below this threshold. This is also reflected by a low effect size for Comfort ( $f^2 = 0.007$ ). Nevertheless, the construct is kept in the model, because based on the other criteria, the reliability of the measurement can still be assumed. Results of the t-value (two-tailed) evaluation shows that Comfort fails the threshold, whereas the other four factors all show t-values clearly above the threshold for the 5% significance level of  $t \geq 1.96$ . Summarizing, Convenience shows the highest contribution on CRS, followed by Safety, Reliability, Connectedness and Comfort.  $R^2$  is 0.568, meaning that 57% of the variance of the CRS concept can be explained by this model. The Stone-Geisser criterion ( $Q^2 = 0.302$ ) is clearly above the threshold of Nitzl, (2010, p. 37) indicating appropriate predictive relevance. Results of the evaluation of the MIMIC model are displayed in Table 5.

Table 5: Evaluation of formative structure model

Factor	$\lambda$	VIF	$f^2$	t-value	p-value	$R^2$	$Q^2$
Convenience	0.265	1.777	0.092	4.164	0.000	0.568	0.302
Connectedness	0.166	1.544	0.041	3.071	0.002		
Comfort	0.065	1.388	0.007	1.381	0.168		
Safety	0.262	1.551	0.102	4.605	0.000		
Reliability	0.219	1.683	0.066	4.358	0.000		

Figure 3 summarizes the results of the evaluation of the CRS MIMIC model.

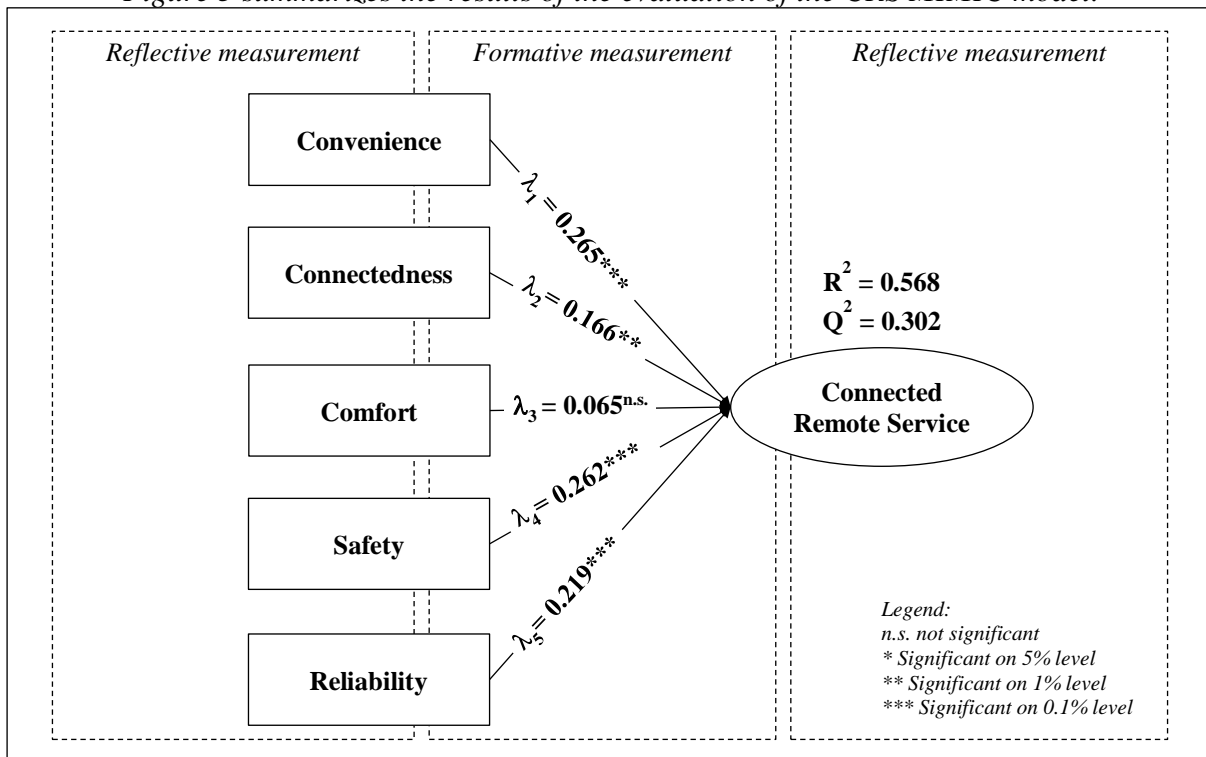


Figure 3: Results of CRS MIMIC model (Author's illustration, based on empirical data)

The evaluation of the CRS MIMIC model questions the assumption that the overall CRS construct consists of five dimensions. All path coefficients, except Comfort are significant. For Comfort, significance is not given, concluding that the concept of Comfort may be no dimension of CRS. Nevertheless, the dimension is kept for further considerations, because the qualitative research has shown that Comfort is relevant. The measured criteria of goodness also

show good results, confirming an adequate level of predictive power. ( $R^2 = 0.568$ ,  $Q^2 = 0.302$ ) The comparison of the path coefficients shows that the four of five dimensions have similar impacts on the overall CRS construct. Convenience has the highest contribution to the evaluation of CRS (27.1%), followed by Safety (26.8%), Reliability (22.4%) and Connectedness (17.4%). As expected, perceptions on Comfort (6.7%) have the lowest impact.

## 5. CONCLUSIONS

This empirical study corroborated and further advanced the CRS typology conceptualized by the author of this paper. CRS was conceptualized as a second-order formative construct that is created from five reflective first-order constructs, Convenience, Connectedness, Comfort, Safety and Reliability. The empirical results suggest that all five dimensions are a valid way of conceptualizing CRS, however the influence of Comfort was shown to be not significant. Despite this result, Comfort is maintained as determining concept of CRS based on the findings of the prior conducted qualitative study, which revealed Comfort as relevant. Further, the evaluation of discriminant validity shows that Comfort is an independent construct. Together the five dimensions cover an acceptable breadth of CRS ( $R^2 = 56.8\%$ ), whereas Convenience and Safety are the most important determinants. This gives rise to the importance of providing convenience-oriented functions of CRS as they are assumed to be beneficiary to users. The importance of Safety implies that gaining customer perceptions of feeling secure by using CRS needs to be further considered within the CRS development process. Although less important, Reliability and Connectedness, remain significant in relation to the overall CRS construct. Reliability, like Safety contributes to perceived Trust towards not only the service object itself but also towards the dealer and brand behind it. This unveils the potential of CRS to influence customer perceptions in various directions. Connectedness as special particularity of CRS was shown to be significant. Thus, the explored concept is to be considered as relevant dimension of CRS in future research.

## 6. LIMITATIONS

There are limitations to the research design and findings in this paper, which need to be considered to generalize the results. First, the distribution of participants in the study does not reflect the customer structure in the automotive industry. Participants' age is shifted towards younger people in comparison to the demographic structure of automotive customers in Germany. Most participants are younger than 44 years. Secondly, this study is limited to the German automotive market, which is a much-fractured market with more than over fifty competing brands. This research and the results as well as the derived conclusions and implications are based on six German car brands offering CRS at a different level of maturity. The findings can differ for other brands or other countries. However, despite several limitations, this study provides a foundation for advanced investigation of user perceptions of CRS in the automotive context.

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## THE IMPACT OF LEGAL AND POLITICAL DETERMINANTS ON THE REGIONAL ECONOMIC INTEGRATION BETWEEN THE MEMBERS OF THE EAEU

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### **ABSTRACT**

*The Eurasian Economic Union (EAEU) integration based on economic factors aims to improve an economic and social development. However, the analysis of processes of the post-Soviet integration should employ noneconomic intra-factors, as well. The purpose of the research is to examine the impact of political and legal determinants on the process of regional integration between the members of the EAEU: Armenia, Belarus, Kazakhstan, Kyrgyzstan and the Russian Federation. The author attempts to indicate the influence of political regimes and foreign policy objectives on directions of external relations including the integration processes of the EAEU area. The descriptive analysis on institutional frames of the economic integration is based on the legal acts, foreign policy strategies, evaluations of international organizations and the official websites of the political institutions. The role of noneconomic conditions in shaping of the international relations including integration steps should not be neglected. Political and legal factors may create and shape advantageous and disadvantageous circumstances for closer Eurasian economic integration, however not in the same manner, whereas certain variables affect regional integration only with other economic conditions. The success or the failure of the Eurasian integration can be determined by institutional frames both in a direct or indirect way.*

**Keywords:** *Eurasian Economic Union, post-Soviet area, regional economic integration, Russian Federation*

### **1. INTRODUCTION**

Regional economic integration is the most advanced stage of regional cooperation. Regional integration as a common multithreaded process is the resultant of many complex determinants, such as geographical proximity, cultural and ideological similarity, economic complementarity, and similarity of political regimes that facilitate negotiation process, and social structure (Haas, 1961, pp. 367, 376-379). Integration is rooted in the common goals, interests, and problems shared through various forms of correlation (Kubicek, 2009, p. 239), such economic interdependence, political interdependence and social interdependence (Keohane and Nye, 1975, pp. 363-377). Processes of regional economic integration exist in the economic area, but also within the social and political dimensions. Nevertheless, they are based on common values, and common political institutions as a collective method of fulfilling practical tasks (Ilievski, 2015, pp. 2-4). Butorina understands regional economic integration as “a model of collective behaviour in the context of global stratification... and the creation of supra-national bodies, the expansion of regional trade, and the introduction of a common currency or citizenship” (Butorina, 2007, p. 102). According to Deutsch and Mattli, the process of regional economic integration involves the connection of the separate economic entities into larger free trading regions, however the legal (institutional) framework for such integration should be perceived as a “promise” of the engaged entities of the future economic actions and decisions (Deutsch, 1957. Mattli, 1999, p. 3). Balassa describes regional integration in the context of theory of negative integration as a process which employs many different instruments that entail the suppression of various discriminatory measures between participating states, thus “absence of

various forms of discrimination between national economies” (Balassa, 2011, p. 1). In result of integration, partners engaged in the process delegate their decision-making powers to a new common institution and its common bodies (Ilievski, 2015, pp. 2-4). However, such process should not neglect their national goals and interests. It is a part of state’s political strategy (top-down integration) (Jeliński, 2008, pp. 317-318. Haas, 1961). Although, a bottom-up integration between the corporations (investment activities and informal links) and non-state organizations (civil society, NGO’s) should not be forgotten, either. Contemporary Eurasian integration in the Commonwealth of Independent States, rooted in the context of Soviet tradition, develops not only economic relations but also political, security, social and cultural cooperation (Vinokurov, 2013, p. 16. Tsygankov, 2012, p. 2). Within the post-Soviet space regional integration grew on the ground of the former disintegration processes. Libman and Vinokurov note that the post-Soviet integration as a holding-together integration seeks to desist disintegration and maintain the previous political and economic ties between the new independent states (Libman and Vinokurov, 2012). A new direction of political and economic development was determined by historical, cultural and political specificities of Eurasian region including long-standing territorial and ethnic conflicts (Konopelko, 2014, p. 216). According to Vinokurov’s “pragmatic Eurasianism”, the integration in the former Soviet Union area should be understood as “a tool for resolving the pressing problems of the states involved” and a guarantee of “the long-term stability and success of this integration project” (Vinokurov, 2013, p. 16). On the other hand, Trenin in his book “The End of Eurasia” treats the post-Soviet integration as a “disappearing reality” and transitional political concept of individual countries without any future (Trenin, 2002). Undoubtedly, the primal purpose of Russia’s integration initiatives is based on its eternal geopolitical concept of regional or even global power and further strengthening its geopolitical influence (Dragneva and Wolczuk, 2017, p. 3).

## **2. THE PROCESS OF EURASIAN ECONOMIC INTEGRATION**

With the fall of the Soviet Union the countries of the former USSR have entered numerous regional integration initiatives, starting with the Commonwealth of Independent States (CIS), the Union State of Russia and Belarus (US R&B), the Collective Security Treaty Organisation (CSTO), the Central Asian Cooperation Organisation (CACO), The Organisation for Democracy and Economic Development GUAM and the other regional groups, however the Eurasian economic integration based on the Customs Union (CU) seems to be the most efficient initiative in the former Soviet Union space, so far. On 29 March 1994, President of Kazakhstan, Nursultan Nazarbayev, announced at the Moscow State University his vision of Eurasianism and the creation of Eurasian Union (Eurasian Economic Union, n.d.). In January 1995 Belarus, Kazakhstan and Russia concluded the Agreement on the Customs Union and further cooperation agreements (Vinokurov, 2010). In October 2000 the Presidents of Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan established the Eurasian Economic Community (EurAsEC) (Eurasian Economic Union, n.d.). The Eurasian Economic Community was an international organisation that since May 2011 has provided multilateral economic cooperation between its members. In 2006 Uzbekistan entered the organisation, however in 2008 it suspended its participation. In 2002 Moldova and the Ukraine were granted observer status at the EurAsEC, and in 2003 the same status was granted to Armenia (Vinokurov, 2010). In 2006, Russia and Kazakhstan established the Eurasian Development Bank (EDB) as a regional intergovernmental development bank with its initial capital base of 1.5 billion dol. The EDB was created to promote Eurasian integration, economic growth, extend economic and trade ties between its member states, mostly by financing investment projects in Eurasian region (Weitz, 2008). In 2006, during the meeting in Sochi the leaders of the EurAsEC member countries decided to intensify cooperation on the Customs Union with Belarus, Kazakhstan and Russia as the founders and with Kyrgyzstan and Tajikistan as the future members. On 16 October 2007

the Presidents of Belarus, Kazakhstan and Russia concluded the Treaty on the Establishment of the Customs Union (Eurasian Economic Integration, 2015, pp. 7-8). The Customs Union, established in 2010 and initiated in 2011, was the first step towards closer integration, in the form of the Single Economic Space and Eurasian Economic Union. The Single Economic Space was signed in November 2003 and formally launched on 1 January 2012 by Belarus, Kazakhstan and Russia (Blockmans *et al.*, 2012, pp. 1-2). In November 2011 the Presidents of Belarus, Kazakhstan and Russia concluded the Treaty on the Eurasian Economic Union (EAEU) to provide a free circulation of goods, services, capital and labour (Договор о Евразийском экономическом союзе, 2014). The official agreement was launched on 29 May 2014. In October 2014, the EurAsEC was dissolved and replaced by the EAEU. It was supposed to be a counterweight to the EU. Armenia entered the EAEU on 2 January 2015 on the basis of the Accession Agreement of 10 October 2014 and Kyrgyzstan on 12 August 2015 on the basis of the Accession Treaty of 23 December 2014 (Eurasian Economic Integration, 2017, pp. 7-8). It is worth noting that previous integration steps within the EurAsEC/EAEU area led to asymmetric mutual relations. The initiatives are composed of the countries of different levels of economic, geopolitical and military potential (Khitakhunov *et al.*, 2016, p. 63). In political sphere, the main player Russia enhanced its geopolitical position. In economic dimension, only Russian Federation noted a positive balance in trade (Świeżak, 2013, p. 21). It is hard to disagree with Kirkham that previous integration initiatives were not fully effective due to multi-vector foreign strategies of particular post-Soviet countries and their openness to Western liberal economies (Kirkham, 2016, p. 116). However, as we may observe in the example of Eurasian Economic Union, regional cooperation might be effective in economic dimension without closer political integration. Unlike the Russian political approach, the other EAEU countries treat Eurasian integration as an economic initiative (Konopelko, 2017, pp. 2-5). Both, Presidents of Kazakhstan and Belarus, contested the idea of the transformation of economic project into political dimension of integration with Russian dominance which could limit their political sovereignty

### 3. THE LEGAL AND POLITICAL CONDITIONS OF EURASIAN INTEGRATION

The intra-factors such political institutions remain a core determinant of the regional integration process. They play the main decision-making role in signing international agreements, thus in the shaping of international relations (Mansfield *et al.*, 2008, pp. 67-96. Milner *et al.*, 2003, pp. 8-35. Halizak and Kuźniar, 2006). The analysis of interdependence between noneconomic determinants such as political regimes and political institutions and the effects of their foreign policy allows to demonstrate a relationship between the noneconomic factors and the processes economic integration (Weaver and Rockman, 1993). With the collapse of the USSR the newly created republics had to confront with the internal challenges such as economic and political crises, political rivalry between two dominant political decision-making centers, the president and the parliament, informal oligarchic political connections and divisions, and corruption scandals among the ruling elites. The leaders of the new post-Soviet countries were rooted in the Soviet 'nomenklatura' and, as the communist technocrats and bureaucrats with the specific mentality, were wont to exist within the previous model of governance (Obydenkova, 2011, p. 99). In most of the EAEU member states the authorities exhibit the model of an authoritarian political regime with a super-presidential ruling system. A specific feature of the political system is a strong leader fostered by its own ruling party, state administration or force power. Repressive authoritarian regimes with their autocratic leaders are not able to accept any possible political opposition and civil resistance. The internal public protests and all forms of civil activity meet regular forcible suppression. Such political mechanism of the controlled authoritarian regimes was defined by Charles Lindblom as the "strong thumbs and no fingers" (Lindblom, 1977). The constitutional arrangements of the EAEU countries were not only

projected as a major legal basis of political system but also as a political concept and instrument of political rivalry of the main political state powers (Lorenz, 2012, pp. 38-42). Many of the constitutional amendments reflected the current political climate. It should be underlined that in most of the analysed political systems the presidential decision-making center dominates other political institutions. The constitution provides for a general universal mandate of the president and his expanded competencies with reduced parliamentary powers of control. The government plays an ancillary role to the president (lack of balance between the state powers). However, the enhanced constitutional position of the president enables him to use his wider prerogatives to create independent domestic and foreign policy including integration initiatives. The subsequent nine edition of "The Economist Intelligence Unit's Index of Democracy 2016" (Table 1) underlines that only one the EAEU member country, Kyrgyzstan was classified as a hybrid regime and the other systems were recognized as authoritarian political regimes (The Economist Intelligence Unit's Index of Democracy, 2016). In general, such evaluation has not been changed for years except for Armenia's case that has been classified as a hybrid regime, so far.

*Table 1: Types of political regimes in countries of the EAEU according to The Economist Intelligence Unit (2006-2010) (The Economist Intelligence Unit's Index of Democracy, 2016)*

	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
2016	authoritarian	authoritarian	authoritarian	hybrid	authoritarian
2015	hybrid	authoritarian	authoritarian	hybrid	authoritarian
2014	hybrid	authoritarian	authoritarian	hybrid	authoritarian
2013	hybrid	authoritarian	authoritarian	hybrid	authoritarian
2012	hybrid	authoritarian	authoritarian	hybrid	authoritarian
2011	hybrid	authoritarian	authoritarian	hybrid	authoritarian
2010	hybrid	authoritarian	authoritarian	hybrid	hybrid

The Freedom House, in its last reports "Freedom in the World 2017" (Table 2) and "Nations in Transit 2017" (Table 3), emphasises that recently the governments of the EAEU member countries have not managed to implement any significant democratic reforms to limit the power of the president and to improve the legal and political conditions for political rights and civil liberties (Nations in Transit, 2017). Only Armenia was classified as semi-consolidated authoritarian regime with "Partly free" freedom status and noted slight improvements. The other states were recognised as the consolidated authoritarian regimes with "Not free" status. In 2016, Kyrgyzstan noted a decline in its democracy score due to the controversial constitutional referendum and the further suppression of the opposition. However, its freedom status remained at "Partly free" level (Freedom in the World, 2017).

*Table following on the next page*

*Table 2: Types of political regimes in countries of the EAEU according to Freedom House (2017) (Nations in Transit, 2017)*

	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Type of regime	semi-consolidated authoritarian	consolidated authoritarian	consolidated authoritarian	consolidated authoritarian	consolidated authoritarian

*Table 3: Freedom status of the EAEU member countries according to Freedom House (2017) (Freedom in the World, 2017)*

	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Freedom status of regime	partly free	not free	not free	partly free	not free
Political rights	5	7	7	5	7
Civil liberties	4	6	5	5	6

Having analysed the changes in legal and political background of regional economic integration between the EAEU member states in the years of 1991-2015, it should be noted that in consolidated authoritarian political systems the alternation of political power was highly limited. In the majority of the evaluated states the elections have not fulfilled the constitutional requirements of free and fair political competition. The lack of participatory organisations and a weak legitimisation of power have affected the negative ratings. Most of the presidents created the constitutional regulations to eliminate the executive term limits and multiply a number of their re-elections. On the other hand, in countries with hybrid regimes, the alternation of power took place more often. However, in Kyrgyzstan, such mechanisms resulted of domestic revolutions, and the increased public mobilisation of the society. In Armenia the power is concentrated in hands of the strong political leaders, the representatives of the Karabakh clan (Ter-Petrosyan, Kocharyan, Sargsyan). Over the years, the role of political opposition has been significantly limited. Supported by the political administration, ruling parties, the police, special services, and due to the informal ethnic clan relationships, political leaders were able to develop their political network (politicisation of ethnicity) (Konopelko, 2011, p. 234). For many years, the Armenian political regime has evolved toward authoritarianism revealing the lack of legitimate executive power, the lack of the “checks and balance” mechanism and a high level of corruption. The foreign policy of Armenia in the post-Soviet area has been affected by the Nagorno-Karabakh conflict between Armenia and Azerbaijan with Russia’s involvement. A decrease of trade integration with the countries of EurAsEC (transformed to the EAEU) can also be reasoned as a mid-term effect of the military clash (Galstyan, 2013, p. 3). In turn, the ultimate pro-Russian direction of Armenia’s foreign policy and its decision on the institutional integration with the EAEU, was compatible with significant growth in its trade relations with the EurAsEC member states and its economic, energy and military dependence on Russia. Belarusian political system is a unique case of a consolidated authoritarian regime in Europe. The autocratic leader, President Alexander Lukashenko, with the loyal support of the officials and state administration tightened his power and political control of the other state powers such as, parliament, army, judiciary and state media (super-presidential political regime). Popular referenda and presidential decrees remain an important instruments of his political power. The international observers underline that the results of elections and referenda are manipulated, and presidential decrees limit or even replace the legislative role of the parliament (Freedom in the World, 2016. Freedom in the World, 2017).

Belarus in its strategy on foreign policy perceives Russian Federation and the Commonwealth of Independent States as major partners in economic cooperation (Foreign Policy of the Republic of Belarus, n.d.). The Republic of Belarus was not engaged in any ethnic, religious and territorial conflicts and did not experience any domestic revolution, therefore it was perceived by Russian Federation as a stable and reliable partner for closer integration (Nations in Transit, 2017). Such conditions created advantageous environment for the stronger institutional integration with the EAEU members and the trade ties which still remain at a very high level. Since 1991, Kazakhstan has not made significant progress in the democratisation of its political system and guarantee of people's rights. President Nursultan Nazarbayev has strengthened the authoritarian power over the other state, regional political institutions, parliament, and judiciary. As the „Leader of the Nation”, Nazarbayev enjoys unlimited competences with a special constitutional authority. Political reforms implemented by the president aim to show theoretical efforts towards democratisation, while in practice they strengthened his constitutional status and his control of political system (“velvet authoritarianism”) (Strachota, 2012). Constitutional changes removed term limits for Nazarbayev opening the possibility of a lifetime presidency. The opposition plays a marginal role in parliamentary elections (Konopelko, 2017, pp. 10-13). In 2016 European Parliament in its resolution on Freedom of Expression in Kazakhstan underlined “the serious deterioration of the climate for media and free speech” calling the Kazakhstan's authorities to review legislation (Human Rights Watch, 2017). President Nursultan Nazarbayev has implemented a consistent pragmatic balanced and multi-vector energy-oriented foreign policy albeit with the priority partners of Russia and the Central Asian region. The president's further integration steps on the basis of the Customs Union were reflected in foreign strategic programmes. In Kazakhstan's Foreign Policy Concept for 2014–2020 President Nazarbayev defined his primary objectives of increasing cooperation with Russia and deepening institutional economic integration in Eurasia (Kazakhstan's Foreign Policy Concept for 2014–2020, 2014). In Kyrgyzstan's “nomadic illiberal” democratic system the clan-regional ties dominated the political area which reflected the traditional tribalism in the state. By 2010 President Kurmanbek Bakiyev had gradually strengthened his power. Pro-presidential political party controls of the other state powers such as the parliament and the government. However, administration remains less centralised than in other Central Asian republics (Nations in Transit. Kyrgyzstan, 2013). On the other hand, such relative autonomy of regional elites enabled the central authorities to hold control over the economic programmes distributed to the regions (so-called “intra-elite” regime) (Kudaibergenova, 2016, p. 2). Following mass protests in 2010 which resulted in collapse of the Bakiyev's regime, forthcoming presidential and parliamentary elections and constitutional referendum, a role and the competencies of Kyrgyz President were limited although the expected stabilisation was not reached (Strachota, 2010). Due to the weaknesses of the political parties, growing corruption, nepotism and individual business interests, considerable changes have not been achieved. Furthermore, recently President of Kyrgyzstan Almazbek Atambayev, using his administration and his party, has consolidated political power weakening the opposition, as well (The Economist Intelligence Unit's Index of Democracy, 2016). After the fall of the USSR, Kyrgyzstan, in line with its multi-vector foreign policy, has developed positive and close cooperation with its neighbours, although ultimately it recognised Russia as a priority in its foreign policy (Malitskaya, 2006). President of Kyrgyz Republic Askar Akayev implemented a multi-vector strategy striving to achieve political and economic balance, whereas under the presidencies of Kurmanbek Bakiyev and Almazbek Atambayev, the country turned closer towards an Eastern vector and sub-regional integration in Central Asia which affected the growth in its trade relations with the participants of the Eurasian Economic Community. The 2010 domestic revolution in Kyrgyz Republic did not induce a decline in economic integration with the EurAsEC members as previous one in 2005, possibly due to

Russian financial assistance. The Russian political system, called a hybrid or facade democracy can be defined as a regime which is an illusion of pluralism and democratic principles. For years, the Russian political system has revealed authoritarian and autocratic mechanisms irrespective of its basic constitutional principles written in Russia's constitution. Critical opinions on Russia's political regime emphasise the infringement of the principle of a democratic state ruled by law. Due to a "managed transfer" of a political power, a fundamental principle of democracy, free fair elections, has been violated (Konopelko, 2008, p. 197). Besides, regular violation of the people's political rights and civil liberties meets with regular condemnation of the opposition and the international public opinion. According to the Freedom House, such gradual weakening of political pluralism, increased control over media (propaganda and cyberwarfare) and the civil society organisations, exhibits the mechanisms of modern authoritarianism (Puddington, 2017, pp. 1-2). The strongly consolidated leadership of subsequent Russia's presidents enabled them to create a consistent foreign policy towards the former Soviet Union territory. Institutional integration revealed the eternal concept of the reintegration of the former Soviet Union and the restoration of the Russian position as a global power (Dragneva and Wolczuk, 2012, p. 13). The above institutional dimension of regional integration is perceived by other countries as one of the Russia's instruments of expanding its geopolitical power in the post-Soviet region. In turn, a decrease in Russia's economic integration has been affected by the low trade engagement of the EAEU countries in overall Russian trade (Czerewacz-Filipowicz and Konopelko, 2017, pp. 301-303). It should be underlined that the other priorities, European Union and China, of Russian foreign strategy became major Russian trade partners (Concept of the Foreign Policy of the Russian Federation, 2013). Besides, the regular increase in the economic integration of Russian Federation and the other CIS countries may be reasoned by the Russian involvement in international conflicts in the post-Soviet area.

#### **4. CONCLUSION**

Political institutions, especially in the post-Soviet space, exist in a context of time and culture and they should be described and analysed by their processes and decisions (dynamic approach) (March and Olsen, 1984, pp. 4,7. DiMaggio and Powell, 1991, pp. 1-38). Within the period of 1991-2015 the Eurasian economic integration in the former Soviet Union space has concentrated on economic dimension but certainly it has been shaped by political decisions of political leaders which have been rooted in the cultural, historical and legal ground. Noneconomic determinants including political and legal conditions may create and shape advantageous or disadvantageous circumstances for closer Eurasian economic integration, but not in the same manner, whereas certain variables determine regional integration jointly with other economic and political conditions (Table 4).

*Table following on the next page*

*Table 4: Noneconomic determinants of Eurasian integration (own elaboration)*

Indirect factors		Direct factors
legal and political background		foreign policy strategies
legal regime	political leadership	
cultural background		
mentality (political culture)	ethnicity	
religion	language	
historical background → (territorial, trans-border clashes)		domestic/international conflicts
socio-economic inequalities →		

The success or the failure of Eurasian integration can be determined by institutional frames both in a direct or indirect manner. Indirect noneconomic factors create the cultural, historical, legal and political environment for the external relationships of the EAEU members countries. The shape of legal and political regime determines a mechanism of setting priorities in foreign policy, therefore it can influence institutional and economic integration in an indirect way. The example of Eurasian Economic Union allows to confirm the theory of the domino effect and shows that regional integration initiatives group the countries of the similar political systems. Almost all of the EAEU member states represent consolidated authoritarian regimes which seems to be “more comfortable with Russia’s model of authoritarian governance” (Boonstra, 2015). The autocratic leaders constantly strengthen their legal and political power weakening the prerogatives of other political institutions. The group of direct noneconomic conditions directly affects interregional and intraregional relationships including processes of economic integration (Czerewacz-Filipowicz and Konopelko, 2017, p. 345). Political decisions on priorities in foreign policy determine the level and the scope of institutional integration, however, they are modified by the current international and domestic conflicts in the region which also affects economic integration. Major objectives outlined in foreign policy concepts by particular member countries of the EAEU have usually depended on their current political and economic position, geopolitical background but also on the current conjunctural needs and interests of their leaders. Russia, by the tightening of its institutional integration within the former Soviet Union space, sought to strengthen its influence zone especially in the context of the current tensions. Global economic slowdown hit the smaller and weaker countries involved in Eurasian integration. Both Armenia, Belarus, Kyrgyzstan and also Kazakhstan in their foreign policy concepts outline Russia as a priority vector to protect their political and economic interests (protective integration) and react to the effects of current political and economic crises. Furthermore, the small landlocked countries are more vulnerable to any domestic and external threats. The examples of the existing “frozen conflicts” on the territory of the former Soviet Union and the previous domestic revolutions, based on socio-economic and political clashes, proved that such hostilities influenced political and economic destabilisation in those countries. In result, they had a considerable effect on the perception of their credibility, bilateral and multilateral interrelationships in the post-Soviet space especially in terms of the extent of their economic and institutional ties and therefore an ultimate decline of integration. Unlike El-Agraa’s theory on regional integration (El-Agraa, 1999) and Vinokurov’s vision of Eurasian integration (Vinokurov, 2013, p. 16), regional integration in the post-Soviet territory has not solved the current political and economic tensions. Russian strategic concept of reintegration of the post-Soviet space and restoration of the Russian-speaking community led to the



maintenance of the existing *status quo*, especially in the context of territorial conflicts in the former Soviet Union space, and the strengthening of economic dependence of poorer and weaker republics such as Armenia, Belarus, Kyrgyzstan and Tajikistan on Russia. In conclusion, it should be emphasised that the Russian Federation has not been directly conflicted with the EAEU member countries. It has supported Armenia in the Nagorno-Karabakh conflict against Azerbaijan but the relative stable relations of Russia with Armenia, Belarus, Kazakhstan and Kyrgyzstan enabled all participants to start and develop a process of closer institutional integration regardless their legal and political regimes.

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## USE OF GREEN PUBLIC PROCUREMENT OF FOOD IN REZEKNE MUNICIPALITY

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### ABSTRACT

*Green procurement is a fast-growing trend in the European Union, and it positively affects the development of local territories. Green public procurement (GPP) is an instrument that directly promotes and ensures an increase in local food sales. Performing a procurement operation in accordance with the principles of GPP and sustainability means making sure that the goods and services purchased have made the smallest impact on the environment and a positive social effect. Accordingly, the choice of food products also plays a large role in reducing environmental impacts and contributing to the health of the population. In Rezekne municipality, GPP criteria for food procurement are not used or it is done very rarely; therefore, the opinions of the local government/parish administrations about the use of GPP of food and barriers to it have to be examined in Rezekne municipality. The present research study continues and supplements the previous ones. The research aim is to examine the use of GPP of food in Rezekne municipality. The research found that the local government of Rezekne municipality did not procure food for local institutions in a centralised way; every civil parish administration did it for the institutions located in their territories. The parish administrations procured 70% of food for the institutions located in their territories in a decentralised way. The dominant principle for identifying the winner of any procurement tender was the lowest price principle, while the selection of the most economically advantageous bids was based on such GPP criteria as quality and environmental friendliness. Research methods used: monographic, descriptive, analysis, synthesis, statistical analysis, a sociological method – a survey of local government/parish administration officials.*

**Keywords:** *opinions of local government/parish administration officials, green public procurement, barriers, local food products*

### 1. INTRODUCTION

In recent years, the principle of “green procurement” has become increasingly important in Latvia. It is defined as the systematic integration of environmental (including social) eligibility criteria into any operation related to the procurement of goods and services. This is one of the environmental policy instruments to be used to reduce impacts on the environment, to achieve social improvements as well as to make budgetary savings (Iepirkumu uzraudzības..., 2017). Since 2006 in Latvia, public procurement has been regulated by the Public Procurement Law that was replaced by a new law on 1 March 2017, which contained essential enhancements and amendments in order to comply with Directives 2014/24/EU and 2014/25/EU. The compliance of public procurement procedures with the legislation is supervised by the Procurement Monitoring Bureau. The Procurement Monitoring Bureau is a direct state administration

authority subordinate to the Ministry of Finance; the purpose of the Bureau is to implement state administrative functions in public procurement. The key functions of the Bureau are to supervise the compliance of procurement and concession procedures implemented by contracting authorities, providers of public services, public partners and public partner representatives with the requirements stipulated in the legislation (Iepirkumu uzraudzības biroja..., 2004). Public procurement operations have to be transparent and to contribute to free competition among bidders as well as effective use of national and local government funding, reducing the risk to contracting entities as much as possible (Publisko iepirkumu..., 2017). Current practices in Latvia show that evaluating bids in the municipal public procurement of food is mainly based on the lowest price criterion. According to research studies, price is the decisive factor in public catering. Researchers Walker and Brammer point out that financial pressure is the most significant barrier to sustainable procurement (Walker & Brammer, 2009). Local food producers are forced to compete with national or even multinational food companies. Overall, domestic food is more expensive, as it is produced in small quantities and its supply costs are high. For these reasons, food producers have to be motivated by various additional terms and conditions so that they remain competitive in procurement tenders, for example, economic efficiency criteria have to be applied to evaluate applicant bids. Researcher Morgan points out that the European Union public procurement rules prohibit indicating "local" food in public catering contracts (Morgan, 2007), even though public institutions may set other requirements in relation to sustainability in public food procurement. By effectively employing criteria for the most economically advantageous bids, it is possible to give an advantage to food produced in Latvia. The criteria could include, for example, price, quality, delivery time, lifecycle cost or environmental values. The Public Procurement Law allows the incorporation of environmental criteria that, in its turn, allows the contracting entity, e.g. a local government, to demand short food chain products. The research aim is to examine the use of green public procurement of food in Rezekne municipality. The research was based on the analysis of scientific and academic publications and the results of the authors' previous research studies; the present paper used information from the Procurement Monitoring Bureau (hereinafter the PMB) and the results of a survey of Rezekne municipality local government/parish administration officials. The survey was conducted to identify the opinions of local government/parish administration officials about the use of GPP of food and barriers to public food procurement in Rezekne municipality. The local government and parish administrations of Rezekne municipality were involved in the survey. Rezekne municipality is comprised of 25 civil parishes with their parish administrations, of which two parish administrations are the administrative bodies of another parish and three parishes have neither a school nor a kindergarten, therefore there is no need for GPP. An official of one parish administration, giving no explanation, refused to participate in the survey. The respondent group comprised 20 officials from the local government of Rezekne municipality and 19 parish administrations of the municipality. The research employed the monographic and descriptive methods to examine the theoretical aspects of green public procurement. Analysis, synthesis and statistical analysis were used to examine empirical data.

## **2. RESEARCH RESULTS**

### **2.1. Theoretical aspects of green public procurement**

Many public institutions in Europe implement in practice not only GPP but also sustainable public procurement – decisions on purchases take into consideration both environmental and social criteria. A. Tukker (Tukker et al., 2008) has admitted that GPP becomes a cornerstone of environmental policies both at EU and Member State levels. Since the International Conference on Environment and Development in Rio de Janeiro in 1992, the understanding of the role of GPP in strengthening sustainable consumption and production patterns has considerably

increased, and now government institutions use it as a policy instrument and a technical tool (Testa et al., 2012). The Europe 2020 strategy stresses that public procurement policies have to ensure as much efficient use of government funding as possible as well as access to procurement markets at the EU level. GPP can help public institutions save funding if considering the total cost of the implementation cycle of any procurement contract, not only the price of purchases. Institutions implementing GPP will be better prepared for facing the growing environmental problems, e.g. reduction of greenhouse gas emissions or transition to a circular economy (Zaļais iepirkums. Rokasgrāmata..., 2016). GPP is an instrument that directly contributes to and ensures an increase in local food sales. Performing a procurement operation in accordance with the principles of GPP and sustainability means making sure that the goods and services purchased have made the smallest impact on the environment and a positive social effect. Accordingly, the choice of food products also plays a large role in reducing environmental impacts and contributing to the health of the population. Sustainable procurement can tackle a variety of social and economic problems. It can create new jobs and increase wellbeing in remote regions, increase contractual opportunities for small and medium enterprises and enterprises of ethnic minorities as well as to contribute to adult basic skills and disability, racial and gender equality by means of specific services earmarked by the contracting parties. Sustainable procurement can also encourage a lot of enterprises involved to introduce innovations and produce most cost-efficient, competitive and sustainable goods and services for the public sector, firms and consumers (Burr, 2009). H.Walker and S.Brammer (Walker un Brammer, 2009) believe that sustainable procurement is a kind of procurement that, in accordance with the principles of sustainable development, for instance, contributes to a strong, healthy and just society, taking into account environmental constraints as well as promoting good governance. A summary produced by the EU enumerates the following GPP advantages: achievement of particular goals and targets in the environmental field, e.g. reduction of greenhouse gas emissions, energy efficiency and preservation of natural resources; cost savings; greater trust of residents, entrepreneurs and the public in state administration institutions; support for innovations and the production of environment-friendly goods and services through increasing their sales opportunities in the market; creation of healthy working conditions for employees; increase in the capacity of public organisations to tackle environment-related problems in the future (Videi nekaitīga iegāde..., 2011). The alliance for better food and farming has defined that sustainable food is a kind of food that is produced, processed and sold in a way that: contributes to the local economy and sustainable living; protects the diversity of plant and animal species (and the welfare of domestic and wild species); avoids damage to natural resources and increase in climate change; ensures social gains, e.g. good quality food, safe and healthy products and education opportunities (Sustain Homepage). S.Clement et al. (2003) argue that local governments are well suited for introducing green procurement. More than national authorities, they have possibilities for more explorative behaviour and can be early movers, also regarding procurement. The EU-prepared summary stresses that local and regional organisations, as well as national administration institutions are increasingly aware of the need to exploit resources effectively and achieve particular policy goals and targets with regard to greenhouse gas emissions, energy, water and waste. The use of land and the reduction of localised emissions produced by transport are the key problems faced by many institutions. GPP allows making environmental policies in conjunction with contracts concluded in the public sector (Videi nekaitīga iegāde..., 2011). Opportunities through sustainable procurement for local governments designed by the EU Member States are as follows: ensuring long-term profitability; reducing the amount of waste, carbon emissions and the consumption of energy and water; promoting recycling and the reuse of packaging etc.; preserving biodiversity; stopping the purchase of unsustainable products or the purchase of products from illegal sources; supporting fair and sustainable economic growth (National

Audit...,2013). Inclusion of GPP would also stimulate the innovation capabilities of firms. According to Porter's theory, GPP could represent a “properly designed” environmental policy instrument able to conjugate environmental benefits and competitive improvement in the firm's performance. Indeed, the high impact of GPP on production activities positively influences the probability that firms invest (at both technological and organizational levels) in innovative solutions (Testa et al., 2011). The authors believe that GPP and the application of sustainability criteria in the purchase of food products are of great importance. Both environmental and economic considerations, which complement one another in a long-term, are taken into account. A “greener” economy reduces environmental protection costs, as resources are used more effectively, while new, ecological approaches and techniques create new jobs, stimulate the economy and strengthen competitiveness.

## 2.2. Assessment of the situation in public procurement by the local government of Rezekne municipality

In Latvia, two kinds of public procurement are practised to cater customers of municipal institutions and schoolchildren: procurement of food products and procurement of catering services. In Latvia, public procurement operations and related data are collected and provided by the PMB, which is a direct state administration authority subordinate to the Ministry of Finance. In recent years, according to the PMB data, the total amount of public food procurement in Latvia exceeded EUR 40 million, and the amount tended to increase (Figure 1). In Rezekne municipality, the average annual amount of public food procurement was approximately EUR 300-400 thousand. An analysis of the annual amounts of public food procurement shows (Figure 1) that the expenditures on food were unstable. In view of the fact that the amounts of procurement were not large, any procurement operation considerably affected the total amount. After examining the reasons of the changes, one can conclude that an orphanage and a primary boarding-school were situated in Rezekne municipality, and food procurement by both institutions accounted for approximately 17% of the total amount of food procurement in the municipality; both institutions announced a procurement tender once in two years. For this reason, in a year when no food procurement tender was announced, a decrease in the amount of food procurement was reported in the municipality.

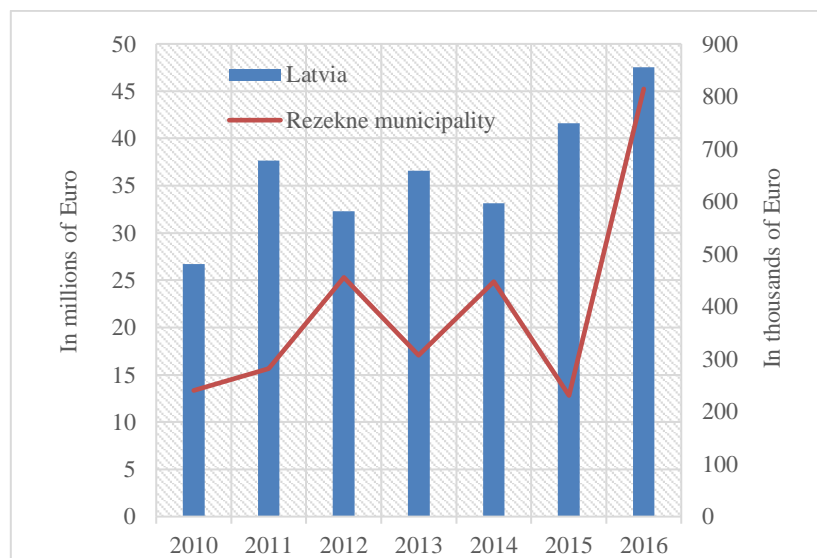


Figure.1: Amounts of public food procurement in Latvia and Rezekne municipality in the period 2010-2016 (authors' construction based on PMB data, 2017).

An analysis of the amounts of public food procurement in Rezekne municipality allows concluding that procurement operations were carried out in a decentralised way. The administration of every civil parish procured food for educational institutions located in its territory, including pre-school educational institutions, while old people's homes and professional educational institutions as well as orphanages carried out procurement operations themselves to provide their customers with food. The dominant principle for identifying the winner of any procurement tender held in Rezekne municipality was the lowest price principle, which did not include sustainability and GPP criteria. This could be explained by the fact that the employees of institutions for whom procurement was only one of the responsibilities lacked knowledge of and experience in how to integrate the criteria in the procurement procedure. Consequently, more than 90% of the procurement tenders were won by wholesale companies and large Latvian food producers.

### 2.3. Use of green public procurement by the local government/parish administrations

Local governments may choose between procuring products in a centralised or a decentralised way. The local government of Rezekne municipality preferred procuring products in a decentralised way, which means that every parish administration procured food for the institutions located in their administrative territories. If the contractual price of goods or services to be procured is within a range of EUR 10 000-40 000, local governments/parish administrations perform a procurement operation in accordance with Section 9 of the Public Procurement Law (Publisko iepirkumu likums, 2017); this means that the procurement procedure has relaxed terms and conditions, e.g. a shorter tender announcement period. Most of the respondents or 60% replied that the procurement of food in their territories was carried out in a decentralised way; 20% procured food in a centralised way, while 20% in a centralised and a decentralised way. In municipalities, two kinds of public catering procurement are practised: procurement of food products and procurement of catering services. A comparison of the public food procurement items catering services and food products reveals (Figure 2) that mostly decentralised food procurement operations were carried out (70%), and centralised operations were performed in 20% of cases. The respondent replies regarding the period of public food procurement revealed that the procurement was most often carried out in August (35%), which was mainly determined by the beginning of a school year. Part of the respondents indicated that it was done in July (15%) and November (15%). An analysis of the length of food procurement contracts (in years) showed that 75% of the respondents preferred a one-year contract, 15% – a two-year contract, while 10% – a contract for less than a year.

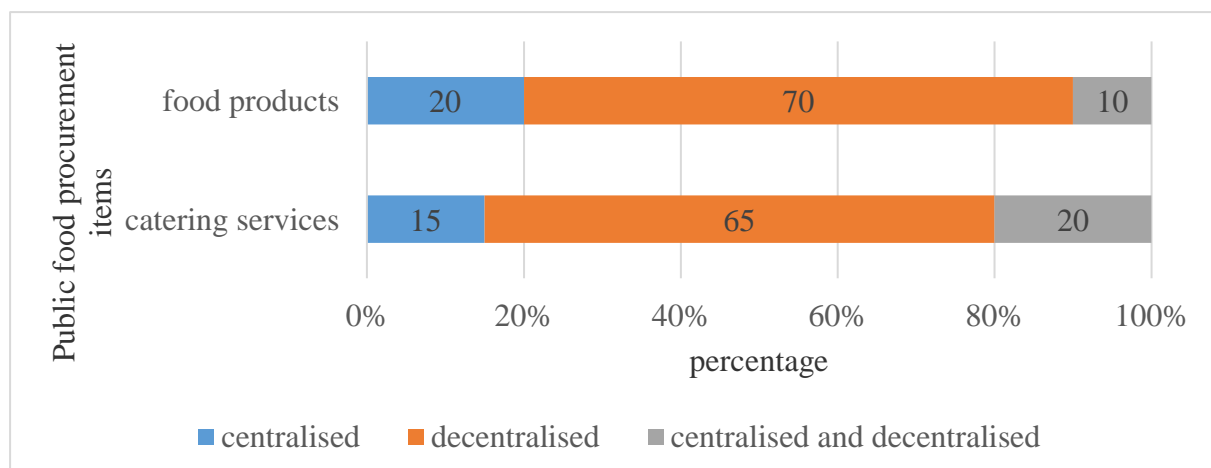


Figure 2. Items of public food procurement by the local government/parish administration of Rezekne municipality (n=20), (authors' construction)



From the perspective of primary food producers, such periods of food procurement are burdensome because the producers already have their crops harvested and cannot adjust their cropping patterns in time according to the quantities of food procured. The short period of food procurement does not provide steady and guaranteed sales for food producers in a long-term. Section 51 of the Public Procurement Law of the Republic of Latvia stipulates that “the contracting entity grants the right to conclude a procurement contract with the most economically advantageous bidder being determined based on cost or price, cost and quality criteria or only price (Publisko iepirkumu likums, 2017). According to the officials of Rezekne municipality, the dominant principle for identifying the winner in food procurement tenders was the lowest price principle (65%), and only in 35% of cases the most economically advantageous bids based on such GPP criteria as quality (29.4%) and environmental friendliness (8.8%) were preferred. Section 19 of the Public Procurement Law provides that a contracting entity or, in this situation, a parish administration has the right not to apply the provisions of Section 9 provided that a procurement contract is concluded at a contractual price of less than EUR 42 000 and complies with the GPP requirements with regard to food supplies set by the Cabinet (Publisko iepirkumu likums, 2017). This means that parish administrations may conclude contracts with food suppliers, applying no procurement procedure prescribed by the Law. It has to be noted that on 1 July 2017 Cabinet Regulation No. 353 “Requirements for Green Public Procurement and their Application Procedure” entered into force; the Regulation stipulates that it is mandatory to apply GPP criteria for the procurement of food and catering services (Prasības zaļajam publiskajam..., 2017). It is a positive provision that directly stimulates the procurement of food for catering customers of municipal institutions and schoolchildren. The respondents’ replies to a question “Are GPP principles used in food procurement?” split evenly: 50% noted that the GPP principles were used and 50% revealed that no GPP principles were used in food procurement. The reasons why the GPP principles were not used, based on the respondents’ free-form replies, could be divided into three categories: no need to apply the GPP principles (because parents supplied their schoolchildren with food grown in their gardens); insufficient knowledge of the application of GPP principles (the principles were unclear, no advantages had been examined, the principles were too complicated and not completely understood); and barriers to the application of GPP principles with regard to potential suppliers (insufficient information about the potential suppliers and the lack of potential suppliers). A positive trend was identified with regard to the use of GPP principles in future, as only 10% or two parish administration officials replied that they did not plan to do it in future. The reply was “not yet” and the reason was “parents supplied their schoolchildren with food grown in their gardens”. As regards prerequisites for the local government/parish administrations of Rezekne municipality to begin using GPP or use it more often, almost all the respondents (19 out of 20) admitted that more active engagement of local producers was necessary (48.7%). The respondents (30.8%) believed that more knowledge of GPP would give an opportunity to begin using GPP or use it more frequently. As to the key barriers to applying the GPP principles by the local government/parish administrations of Rezekne municipality, 12 out of the 20 respondents or 40% believed that there were no local producers being able to supply necessary food products (Table 1). Of the respondents, 30% believed that GPP makes bids more expensive. Only two respondents or 6.7% admitted that there were no barriers to applying the GPP principles. Some causal associations could be identified with regard to the respondents’ plans to use or not to use the GPP principles in future and the key barriers to it. One can conclude that the local government/parish administrations that planned to use the GPP principles in future believed that the key barrier was the lack of local producers being able to supply necessary food products (40.7%) and 29.6% admitted that GPP made bids costlier.

An analysis of the findings revealed that one of the key problems in the effective use of GPP principles in public food procurement by the local government/parish administrations of Rezekne municipality was the passivity of local producers as well as, unfortunately, the lack of local producers that could be able to participate in GPP operations. This is largely associated with the above-mentioned fact that local governments did not take into account the production cycle of local producers when announcing a procurement tender; for this reason, the producers had often found buyers for their products. Wholesalers were usually the key suppliers of food to Rezekne municipality institutions – this reply was given by 19 out of the 20 respondents, comprising 55.9% of the total replies. It is a logical continuation for the mentioned fact – the lack of local producers was offset by wholesalers. Nevertheless, it has to be noted that 13 out of the 20 respondents admitted that local food products were supplied by local producers as well. Only one respondent pointed out that wholesalers represented local producers and one more respondent noted that schoolchildren parents were food suppliers. Despite the known positive change in the application of GPP of food, it has to be concluded that without wholesalers, local producers cannot provide Rezekne municipality institutions with necessary food products.

*Table 1. Key barriers to applying the GPP principles by the local government/parish administrations of Rezekne municipality and their future plans in relation to the application of the GPP principles (n=20) (calculations done by the author by means of the SPSS program according to the data of a questionnaire survey)*

			Does the local government/parish administration plan to use the GPP principles in future		Total
			yes	no	
Key barriers to applying the GPP principles <sup>a</sup>	No idea how to do that	Count	6	1	7
		% within barriers	85.7%	14.3%	
		% within plans	22.2%	33.3%	
		% of total	20.0%	3.3%	23.3%
	It makes the bid more expensive	Count	8	1	9
		% within barriers	88.9%	11.1%	
		% within plans	29.6%	33.3%	
		% of total	26.7%	3.3%	30.0%
	No local producers being able to supply necessary food products	Count	11	1	12
		% within barriers	91.7%	8.3%	
		% within plans	40.7%	33.3%	
		% of total	36.7%	3.3%	40.0%
	No barriers	Count	2	0	2
		% within barriers	100.0%	0.0%	
		% within plans	7.4%	0.0%	
		% of total	6.7%	0.0%	6.7%
Total	Count	27	3	30	
	% of total	90,0%	10.0%	100.0%	

*Percentages and totals are based on responses.*

*a. Dichotomy group tabulated at value 1.*

The respondents mentioned the following local producers that supplied food: the JSC "Latgales piens", "Rēzeknes gaļas kombināts" Ltd, "Vecā maiznīca" Ltd, "Dimdiņi" Ltd, the farm "Lukstiņmājas", the farm "Pakalni", the farm "Eži", the farm "Sīļusala", the agricultural service cooperative "Kalnakrogs Agro". Of the respondents, 90% replied affirmatively to a survey question "Is the quantity of food procured split into portions?". The reasons why it was split into portions were divided into two categories: one supplier could not supply the necessary assortment of products and an opportunity was given to other local producers to supply a few products. An essential role in increasing the amount of sales of local food is played by the public sector that raises the share of local food to be procured through public tenders. GPP is an instrument that directly stimulates and ensures an increase in local food sales; for this reason, it is necessary to identify the opinions of local entrepreneurs about opportunities for and barriers to their participation in public food procurement in Rezekne municipality in future research studies.

### 3. CONCLUSION

1. GPP is an instrument that directly contributes to and ensures an increase in local food sales. It can create new jobs and increase wellbeing in remote regions, increase contractual opportunities for small and medium enterprises. GPP also promotes cost savings in a long-term and achieves particular goals and targets in the environmental field, e.g. reduction of greenhouse gas emissions, energy efficiency and preservation of natural resources, consumption of energy and water; promotion of recycling and the reuse of packaging etc. In recent years, an upward trend in the procurement of food products was observed in Latvia as a whole. In Rezekne municipality, the average amount of food products procured was volatile, as a few government-funded institutions announced a procurement tender once in two years. In Rezekne municipality, food was procured in a decentralised way, and the dominant principle for identifying the winner of any procurement tender was the lowest price principle, which did not include sustainability and GPP criteria.
2. In Rezekne municipally, its local government did not procure food for all the municipality institutions; every parish administration individually procured food for the institutions located in their territories. In their territories, the parish administrations procured 70% of food in a decentralised way. The dominant principle for identifying the winner of any procurement tender was the lowest price principle (65%), while the selection of the most economically advantageous bids was based on such GPP criteria as quality and environmental friendliness.
3. The use of GPP in public food procurement by the local government/parish administrations of Rezekne municipality could promote the engagement of local producers in GPP operations, as 19 out of the 20 respondents revealed that the entire quantity or part of it was supplied by wholesalers. The officials admitted the problem was that no sufficient number of local producers was available in their administered territories as well as the fact that the local producers were reluctant to participate in food procurement tenders. This could be partly related to the fact that local governments used to announce food procurement tenders at the end of summer and in autumn when farmers are not able to respond to the tenders, as they have not produced necessary vegetables or have found buyers for their seasonal produce.

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## **SIGNIFICANCE OF SHARED TAXES IN THE TAX SYSTEM OF THE REPUBLIC OF CROATIA**

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### **ABSTRACT**

*Current tax system of the Republic of Croatia can be viewed through three fiscal levels and fiscal decentralisation is very much in motion. Which sources of fiscal revenue, in what capacity and in what way to distribute are the main problems that all federative states encounter frequently. However, states that are not federative, but have developed system of regional and local self-government encounter the same problems because of the high level of decentralisation of public functions. One of the benefits of fiscal decentralisation is to draw attention to the problems concerning revenue collection or the lack of it when the local and regional self-government units are in question. Tax systems of modern countries are using a large number of tax forms, which differs from country to country. The Republic of Croatia has adopted solutions that are used by the majority of European countries. Each fiscal level has its own revenue to collect, especially tax revenue. But one category of tax revenue stands out – shared taxes. The revenue collected from shared taxes is divided between two or more fiscal levels. The paper will present importance of satisfying public needs in terms of counties, cities and municipalities through a way of collecting tax revenue derived from shared taxes.*

**Keywords:** *shared taxes, fiscal decentralisation, personal income tax, self-government units*

### **1. INTRODUCTION**

Main sources of local self-government unit revenue are:

1. Tax revenue
2. Non-tax revenue
3. Revenue derived from capital (income from sale of nonfinancial assets)
4. Grants (aid).

There are four criteria that determine whether some taxes are shared revenue:

1. if there is a fixed share (local self-government units are fully confronted with risk of changes / variations in revenue distribution)
2. divided revenue is unconditional (it has no determined purpose)
3. in advance (at least for one year) there is a stable formula for revenue sharing
4. Shared revenue is proportional to the amount of revenue collected in the area of the local self-government unit.

If these conditions are not met, shared sources of revenue are considered to be grants (grants) or transfers. Shared taxes should never be classified as own sources of revenue of local self-government units.

There are four criteria that examine how a certain fiscal arrangement generates and distributes revenue. The four criteria – and the underlying questions - are as follows:

1. Risk sharing: Is the amount of revenue allocated to the sub-central level strictly related to total tax revenue (e.g. as a given share of annual tax revenue), i.e. does the sub-central level of government fully bear the risk of tax revenue slack and fluctuations?
2. Un-conditionality: Is sub-central government free to use the revenue allocated, i.e. are the revenues unconditional (non-earmarked)?
3. Formula stability: Is the revenue share between the central and the sub-central government predetermined in advance and not changed in the course of a fiscal year?
4. Individual proportionality: Is the revenue share of each sub-central government strictly related to what it generates on its own territory, i.e. is there no horizontal redistribution or fiscal equalisation across sub-central governments?

The first three criteria refer to the relationship between central and sub-central government (vertical relationship), the fourth criterion refers to the relationship between sub-central governments (horizontal relationship).

- If an arrangement fulfils all four criteria, it will be referred to as strict tax sharing.
- If an arrangement fulfils the first three criteria but not the fourth (individual proportionality), it will be referred to as tax sharing.
- If an arrangement does not fulfil the first three criteria, it will be referred to as intergovernmental grant. (Blöchliger and Petzold, 2009, p. 5.)

## **2. MAIN SOURCES OF LOCAL SELF-GOVERNMENT UNIT REVENUE**

Financing of local and regional self-government units in decentralized countries is of great importance, both for the development of the overall economy, as well as for the development of local and regional self-government units which carry out the logic of polycentric development. To satisfy this postulate it is necessary to find the optimal method of financing- Local and regional self-government units in their budgets have to ensure revenue which are proportional to expenditures, from its own sources, of shared taxes and grants from state and county budgets.

Revenue of local and regional self-government units:

1. Income from movable and immovable objects in their possession
2. Income from companies and other entities owned and revenue from concessions granted by local self-government units
3. Revenue from the sale of movable and immovable objects in their possession
4. Gifts, inheritances and legacies
5. Municipal, town and county taxes and fees and duties, whose rates, within the limits specified by law, are determined independently
6. Government assistance and grants provided by the state budget or a special law
7. Compensation from the state budget for performing services of the state administration, which were conveyed to them
8. Other revenue determined by law. (Srb and Perić, 2004, p. 93)

## **3. SHARED TAXES IN THE REPUBLIC OF CROATIA**

There is one very important category of public revenue that we must emphasise- shared taxes. The most important remark dealing with shared taxes is revenue belonging, so which unit of the public administration the revenue belongs to. Countries with a higher share of local consumption (such as the Nordic countries) rely more on personal income tax, but are inclined to apply a uniform tax rate to reduce progressivity and to minimize fiscal inequality among local self- government units.

Croatia is somewhat unusual: low stage of decentralization, but larger lean on progressive taxes (tax on income) in financing local self-government unit. By adopting a series of decisions and regulations at the beginning of July 2001, the first phase of the decentralization process began in Croatia with the intention of transferring the management and financing of part of public needs to municipalities and cities, while at the same time ceding part of the insufficient revenue to ensure their financing. The distribution of the shared tax revenue between the state and the local authorities has also been changed. Revenue from shared taxes in percentage determined by law belongs to individual levels of government (central state, county, municipality and city) and shared taxes are:

1. personal income tax, which is divided between the state, the municipality, the city and the county
2. corporate income tax, which is divided between state, municipality, city and county
3. tax on real estate sales transactions, which is divided between the state, the municipality and the city.

Advantages of local personal income tax are:

- abundance
- certainty of incidence
- possibility of establishing clear connection between tax obligation and benefit from local public goods and services
- simplicity of payment

But there are also some disadvantages:

- political barriers for which the central state is not inclined to share revenue from this tax with local self-government units
- high administrative costs of local self-government units for taxation of personal income because the tax basis (people) is more mobile in comparison to the tax basis of any other local tax (e.g. property tax).

Shared tax in the Republic of Croatia is personal income tax. Personal income tax is a convenient source of income for local self-government units because it meets most of the criteria set before local taxes. Personal income tax is the most significant revenue especially when it comes to cities and municipalities.

Revenue from personal income tax is divided between:

- municipality/city - 60%
- county - 16,5%
- part for decentralized functions - 6%
- part for position for aid of equalisation for decentralized functions - 16%
- part for position for aid for project co-financed with funds of European structural and investment funds, project managers being municipalities, cities and counties - 1,5%.

Decentralized functions are social care, education, health care and fire department. But it is very important to emphasize that the operational side of these functions is financed through Personal income tax. When it comes to personal income of people employed or taking care of these functions, their income derives from state budget. Operational side includes mostly material costs (buildings, equipment, furniture etc.) in connection to performing these functions. (Jerković, 2017, p. 362)



Shared taxes untill 1st July 2001.	Shared taxes from 1st July till 1st January 2007.
1. Personal income tax - state 70% - municipality/city 25% - county 5%	1. Personal income tax (state 29.2%, municipality/city 32%, county 8%) 1.1.personal income tax for decentralised functions (9.8%) - primary education 2.9% - high school education 2.0% - social welfare 2.0% - health care system 2.9% 1.2.part for position for aid of equalisation for decentralized functions 21%
2. Corporate income tax - state 70% - municipality/city 20% - county 10%	2.Corporate income tax - state 70% - municipality/city 20% - county 10%)
3. Tax on game of chance tax - state 50% - municipality/city 50%	3.Tax on real estate transaction - state 40% - municipality/city 60%)
4, Tax on real estate transaction - state 40% - municipality/city 60%	4. Shared revenue from concessions 4.1.for pumping mineral and thermal water (state 50%, municipality/city 50%) 4.2.for water for public water supply(state 70%, municipality/city 30%)

*Table 1: Shared taxes in the Republic of Croatia from 2001.-2008.*

In connection with the above, it is necessary to open the issue of fiscal equalization. Since the goal of each local self-government unit to provide a satisfactory level of public service to its residents, it should be borne in mind that a large number of local self-government units do not have sufficient own revenue to finance local public services. The task of the state is to provide an adequate fiscal equalization system that will absorb part of the funds that are missing. The issues of fiscal equalization in the system are solved by dividing part of the income tax for decentralized functions in primary and secondary education, social welfare and health care, and local units that do not generate enough funds to finance decentralized functions leave the share of income tax on aid equalization for decentralized functions. Funding aid for decentralized functions are secured from the state budget to cover public expenditure on primary and secondary education, social welfare and health care, which are transferred to local and regional self-government units. (Jurlina Alibegović, 2003, p. 96)

*Table following on the next page*

Shared taxes from 19th June 2008.	Shared taxes from 1st March 2012.
1. Personal income tax - municipality/city - 55% - county - 15,5% - part for decentralized functions - 12% - part for position for aid of equalisation for decentralized functions – 17.5%	1. Personal income tax - municipality/city – 56.5% - county - 16% - part for decentralized functions - 12% - part for position for aid of equalisation for decentralized functions – 15.5%
2. Tax on real estate transaction - state 40%, - municipality/city 60%	2. Tax on real estate transaction - state 40% - municipality/city 60%

*Table 2: Shared taxes in the Republic of Croatia from 2008.-2015.*

In the system of financing of local and regional self-government units, the biggest changes have been introduced with respect to the distribution of income tax revenue to the benefit of lower levels of fiscal authorities. The share of the state in income tax revenue has been reduced and the share of municipalities, cities and counties increased. In particular, part of the income tax for decentralized functions in primary and secondary education, social welfare and health care has been allocated. Local self-government units that do not generate enough funds to finance decentralized functions are provided with part for position for aid of accommodation for decentralized functions. Participation in the distribution of other shared taxes, i.e. tax on real estate transaction has remained unchanged until 2015. when the share of municipalities and cities increased.

Shared taxes from 1st January 2015.	Shared taxes from 1st January 2017.
1. Personal income tax - municipality/city - 60% - county - 16,5% - part for decentralized functions - 6% - part for position for aid of equalisation for decentralized functions – 16% - part for position for aid for project co-financed with funds of European structural and investment funds, project managers being municipalities, cities and counties - 1,5%.	1. Personal income tax 2. - municipality/city - 60% 3. - county - 16,5% 4. - part for decentralized functions - 6% 5. - part for position for aid of equalisation for decentralized functions – 16% 6. - part for position for aid for project co-financed with funds of European structural and investment funds, project managers being municipalities, cities and counties - 1,5%.
2. Tax on real estate transaction - state 20%, - municipality/city 80%	

*Table 3: Shared taxes in the Republic of Croatia from 2015.-2017.*

In addition to the above-mentioned tax revenue, local self-government units have many other revenue introduced based on special laws and / or decisions by representative bodies, such as fees and duties contained and reported in the non-tax revenue of their budgets.

#### 4. SHARED TAXES IN SOME OF THE COUNTRIES

The division of revenue or division of responsibility for the collection and disposal of tax revenues between the central and lower levels of government model is used by many countries such as Germany, Austria, Switzerland, Denmark, Spain, Poland, Hungary, Korea, Mexico. Among the best known examples of tax sharing in Europe are those in Germany and Austria. Tax sharing arrangements in Germany cover income taxes and the Value Added Tax. All Länder together are entitled to a 50 percent share of the income tax revenue, while their VAT share is periodically negotiated with central government. Tax revenues are first allocated on the basis of what each Land (roughly) collected on its territory (individual proportionality), but in a second step horizontal fiscal equalisation redistributes these tax revenues to reduce differences in revenue raising capacity. The German arrangement is hence “tax sharing” since the individual proportionality criterion is not fulfilled.

	Centre (%)	Land (%)	Local authorities (%)
Personal income tax	42,5	42,5	15
Corporation tax	50	50	0
VAT	50,5	49,5	0

*Table 4: Main shared taxes in Germany, Source: Local finance in Europe, Council of Europe, Local and regional authorities in Europe, NO. 61, p. 40.*

It should be noted that these three taxes account for about 75% of Germany's total tax revenue. In Austria many taxes are shared, but the rules for determining the state and local authority taxes are complex. The main shared taxes and their approximate shares are:

	Centre (%)	Land (%)	Local authorities (%)
Personal income tax	60	22	18
Oil duty	88,5	8,5	3
VAT	69	19	12

*Table 5: Main shared taxes in Austria, Source: Local finance in Europe, Council of Europe, Local and regional authorities in Europe, NO. 61, p. 41.*

In each subcentral tier income taxes are shared in reference to state tax yields and populations while VAT is shared with reference to population. Oil duty is shared with reference to many factors including populations, road lengths, areas and oil tax yields.<sup>1</sup> In Korea, a part of local government revenue is provided by the “Local Allocation Tax” (LAT). The LAT is a fixed share of central government tax revenue, and the share is periodically adjusted. The LAT is redistributed across local governments taking a number of need criteria into account. In the current classification the LAT is classified as a grant. Under the test described above the LAT would classify as “tax sharing” since the three criteria risk sharing, formula stability, and unconditionality are fulfilled. In Mexico, Mexican estados and municipalities are entitled to 20 percent of central government tax revenue. This sharing mechanism is called the “Fondo General de Participaciones”. The Fund was established in the 1980s when it replaced a set of autonomous state level taxes. The state’s share is distributed on the basis of foregone SCG own tax revenues and a number of needs criteria. States and municipalities can use their share freely. The Mexican system would hence be classified as “tax sharing” since the individual proportionality criterion does not hold. In Spain, the Spanish Comunidades Autonomas (regions) are entitled to a 35 percent share of the Value Added Tax (VAT) and 40 percent of excise taxes. Tax revenue is allocated across the regions on the basis of an index of

<sup>1</sup> Local finance in Europe, Council of Europe, Local and regional authorities in Europe, NO. 61, p. 41.

consumption, which can be seen as a proxy for VAT and excise tax revenue generated in a region. The Spanish system would hence classify as “strict tax sharing” since the VAT share allocated to each region is proportional to what that region generated on its territory (or, more precisely, it is proportional to what households consumed in that region). (Blöchliger and Petzold, 2009, p. 8.) Of the Western European federations Switzerland offers the largest degree of regional and local tax autonomy. The Swiss constitution stipulates that the federal government may raise personal income tax, but only up to 11.5 percent on the income of the general population. Swiss cantons receive a share of 17 percent in the federal income tax based on what they generated on their territory and a further 13 percent inversely related to fiscal capacity (fiscal equalisation). Cantonal and local governments receive a total of 26 billion of Swiss francs in shared taxes or specific grants. (Swenden, 2006, p. 121)

## 5. CONCLUSION

Primary goal of every local self-government unit is to provide satisfactory level of public services to its citizens, but we have to keep in mind that many of the local self-government units do not dispose of adequate own revenue for financing local public services. So the central state has to ensure adequate system of fiscal accommodation which needs to settle part of the means that are missing to successfully satisfy all of the local public needs.

Local government units generate tax revenue from two main sources:

- county and municipal / city taxes
- shared taxes.

In the Republic of Croatia, the law provides for the distribution of shared taxes between the state and local self-government units. Local self-government units get part of income from shared taxes: personal income tax, tax on of real estate transactions till 2017 and corporate income tax till 2007. When forming personal income tax, attention should be paid to the choice of tax basis and tax rate, as well as calculation, payment and collection procedures. In the Republic of Croatia issues of fiscal accommodation are being dealt with in the way that part of revenue collected from the personal income tax is extracted for decentralized functions in primary and secondary education, social care, health care and fire department (i.e. 6%). Local self-government units that do not earn enough revenue for financing those decentralized functions get part of the revenue collected from the personal income tax for position for aid of equalisation for decentralized functions (i.e. 16%)(Jurlina Alibegović, 2003, pp.96-97). By 2017, equalization assistance funds for decentralized functions were financed from 16% of part for position for aid of equalisation for decentralized functions in personal income tax revenue. The new Act provides for funds for decentralized functions to be provided as a transfer from the state budget.(Bajo and Primorac, 2017, p. 2) Some say that shared taxes blur accountability: they do not award regions that have a smart fiscal and budgetary policy and they do not punish regions which perform poorly on both accounts. But they do facilitate the achievement of certain redistributive goals. (Swenden, 2006, p. 125) The aim of the described changes in the local and regional self-government financing system in the Republic of Croatia was to transfer powers, increase the level of responsibility and the scope of providing public services to the local level, while securing funds for their financing. It may have not succeeded entirely and there is a lot room for improvement but shared taxes are of great importance when it comes to satisfying not only fiscal goal of taxation, but social, economic and redistributive goals as well.

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# COMMERCIALIZATION OF SCIENTIFIC RESEARCH RESULTS AND TRANSFER KNOWLEDGE AND TECHNOLOGIES TO ECONOMY AS DETERMINANTS OF DEVELOPMENT OF UNIVERSITIES AND ENTERPRISES IN POLAND – LEGAL AND ECONOMIC PERSPECTIVE

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## **ABSTRACT**

*Results of scientific research, being the output of academics in universities, since the establishment of universities have been a factor of economic development of states. Currently a dynamic development of scientific research is visible, especially in the scope of modern technologies and medicine which subsequently were implemented for widespread use. However, to make the implementation of modern technologies efficient and effective, the close cooperation is necessary between universities with their social and economic milieu, i.e. the enterprises which will transform the results of scientific research into a ready-made product. It is possible by commercialization of results of scientific research and transfer of technologies and knowledge to economy. Cooperation of universities with their social and economic milieu contributes to the development of universities, enterprises, and in consequence with the state economy. Moreover, the innovativeness of economy is of key importance for economy, however the places where most of innovations are created, these are universities with qualified staff of scientists and specialists in various fields. Idea of university facilitates the transfer of knowledge and interdisciplinarity of their activity, through which the results of scientific tests and prototypes of products are characterized by holistic development. It must be emphasized, though, that also business representatives may, apart from manufacturing prototypes, assign a task to a university to conduct specific tests of new or perfected models of products. This article aims at analysis of legal and factual cooperation of universities with social and economic milieu in Poland and selected European countries, as well as a definition of the appropriate institutional model of interrelations of universities with their social and economic milieu.*

**Keywords:** *Commercialization, Social and economic milieu, Transfer of technologies and knowledge, Universities*

## **1. INTRODUCTION**

Since the beginning of existence of universities, i.e. since the 11<sup>th</sup>-12<sup>th</sup> centuries (Zientara 2006; Dowley, 1990) their basic task was the expansion of knowledge, conducting of scientific activity as well as educating future generations. One can state, therefore, that the establishment of universities was a key factor contributing to the civilizational development of humanity. Universities are centers where innovative solutions are created, which are subsequently transferred to the social and economic milieu. The effective cooperation of universities and business is provided by institutional instruments, by creating appropriate legal norms in the

sources of generally applicable law, as well as specific public institutions and authorities. Apart from the benefits arising from cooperation of universities with business one may point out the risks connected with re-evaluation of activity of universities to strictly commercial activity. In the pertinent literature one can perceive a notion of „marketisation of higher education”/„marketisation of the university”, especially visible in Great Britain (Williams, 2010; Molesworth, Scullion, Nixon, 2011; Foskett, 2011), which leads sometimes to treating a university as an enterprise, and a student as a consumer (Maringe, 2011; Molesworth, Scullion, Nixon, 2011). These tendencies show an appropriate, and even a dangerous direction of complete commercialization of a university. One cannot equate between a university and an enterprise, because it would lead to an erroneous conclusion assuming that knowledge and science is ordinary merchandise, its spreading a service, academic teachers as contractors and students its clients. Therefore, the appropriate assumption is commercialization of scientific research results and their transfer to the social and economic milieu for widespread implementation, not commercialization of a multi-aspect activity of universities. Traditionally, a university was a corporation of professors and students, however, already for a certain period of time more groups of interests join these two groups, such as the widely perceived social and economic milieu. One must emphasize that the appropriate way is a development of cooperation between universities and social and economic milieu, especially corporations (Baaken, Davey, Muros, Meerman, 2011), what will significantly contribute to the development of universities and companies, including a sector of micro-, small and medium companies (Kozien, 2017). As a consequence, such cooperation will influence positively the economic situation of a country, especially that domestic businesses usually also comprise the social and economic milieu of a university. Moreover, it will allow for implementation of innovations on the domestic market, and will not necessitate the sale of scientific research results abroad. In Poland it is also essential, apart from appropriate regulations and legal instruments, the breaking of barriers between universities and companies by showing numerous bilateral benefits, arising from close cooperation of universities with business in many fields of studies. One must also explain the range of meaning of basic notions – cooperation with social and economic milieu is the widest notion, however the transfer of knowledge and technologies, as well as commercialization of results of scientific research are the notions with narrower scope of meaning. In the source literature the cooperation of a university with social and economic milieu is treated as the so-called „third mission” apart from the scientific activity and conducting research as well as education. This article aims at analysis of legal and factual cooperation of universities with social and economic milieu in Poland and selected European countries, as well as a definition of the appropriate institutional model of interrelations of universities with their social and economic milieu.

## **2. ANALYSIS OF EXAMPLES OF COOPERATION BETWEEN UNIVERSITIES AND SOCIAL AND ECONOMIC MILIEU IN EUROPE**

In various European countries one may perceive specific forms of partnership one can notice specific forms of partnership enterprises between universities and the business world, which make it possible for universities to obtain vast possibilities of financing (European Commission - Education and Culture DG, 2008). One of the most widespread forms of cooperation are joint research projects and ordered research. In some countries, i.e. for example Belgium, (French speaking and Flemish Communities), Bulgaria, The Czech Republic (ISCED 5A), France, Italy, Lithuania, Hungary, Poland, Portugal, Romania, Finland, Sweden and Norway within the scope of various partnership enterprises and often in cooperation with local or regional authorities, innovative and technological parks were established. Another example of cooperation between a university and business are partnership enterprises with participation of employers and universities, operating in Italy. They refer to sponsoring of Master’s degree studies as well as

scholarships for diploma projects which would be compliant with the objectives and the focus of interest of employers' associations. Another example are doctoral degree research projects which in Belgium (Flemish Community) can be implemented in cooperation with enterprises. Another idea implemented in some universities in Bulgaria is the establishment of research (centers) sectors within university structures whose tasks is the development of research projects and subsequently submitting them to the National Science Fund. If a given project is implemented successfully, then revenues and ownership rights belong to research centers. Moreover, in some countries, e.g. in France, Denmark, Germany, Great Britain, apart from doctoral academic thesis also the implementation doctorates are being completed, being the important element of cooperation between universities and business. One of the best examples of cooperation of science with business is the so-called „Cambridge Phenomenon” (Kirk, Cotton, 2016; Green, 2011). As a result of transfer of knowledge and technology, as well as commercialization of scientific research results from universities to the social and economic milieu, Cambridge enjoyed spectacular success in a form of increase of economic growth, fourfold higher than in another part of the country. In Cambridge still in the mid- 1950s the only significant institution was the University. The city was neither a business nor industrial centre, it did not have any natural resources. In 1960 two graduates from the University, Tim Eiloart and David Southward, founded Cambridge Consultants, which subsequently became a catalyst of the currently leading technological cluster (<http://www.cambridgephenomenon.com/phenomenon/>). With time, around the university providing the base of science and knowledge, numerous high-tech profile entities have been established, which radically changed the economic situation for Cambridge. From the side of university, the system of education is important, assuming individual work, vast selection of subjects and a small number of obligatory canon of subjects. Moreover, the university provides high level of research in university institutes and transfer of knowledge and technologies to enterprises surrounding the university. At the same time the university is supported by private enterprises, also the high availability of private funds is available from Investors, such as Business Angels and Venture Capital Funds. Moreover, scientific institutes specializing in specific fields of science exist, for example Babraham Institute, as well as scientific parks. They facilitate the conducting of scientific research, establishment of new companies and join science and business. An important link in the cooperation of university with business there are also numerous Social Networks, which are the groups of persons or organizations who know one another, are related to business and willing to help within the scope of cooperation of a university with business. Currently in the cluster around 1000 technological and biotechnological companies are active, and even 1400 if suppliers and supporting organizations are included. It is worth emphasizing that more than 40 000 persons arrived or stayed in the Cambridge region to work in these enterprises (<http://www.cambridgephenomenon.com/phenomenon/>). One can state, therefore, that Cambridge has been successful not only in science, technology and economy, but also in the social and environmental scope. In Europe, the state which is dominant in the scope of multi-aspect cooperation of a university with business is Great Britain. Apart from the „Cambridge Phenomenon” itself, in Great Britain numerous start-ups operate, as well as spinoff universities, whose development has been observed since the 1990s. (Shane, 2004), where the knowledge and modern technologies from universities is transferred. It must be expressly emphasized, though, that in Great Britain the high-tech industry, which cannot exist without close cooperation with universities, has developed through cooperation of universities with enterprises. It must be pointed out that similar models of cooperation of university with business can be observed in great number of instances in the United States of America, the “Silicon Valley” being the best example of such cooperation.



### **3. COOPERATION OF STUDIES WITH SOCIAL AND ECONOMIC MILIEU PURSUANT TO THE HIGHER EDUCATION ACT IN POLAND**

The Act regulating the entire sphere of higher education in the Polish law is the Higher Education Act of 27 July 2005 (i.e. Dz.U. – Journal of Laws of 2016 item 1842 as amended). Analyzing the act with a view to regulations regarding the cooperation of a university with business or commercialization of scientific results and transfer of knowledge and technology into economy – one must indicate art. 13 section 1 item 3, in which the legislator, among primary objectives for a university, described „conducting scientific research and developmental works, performing research services and transfer of technologies into economy”. This is a general norm, however, important from the point of view of the system of the higher education act, because it requires a transfer of technologies from the university to economy. Moreover, between two parts of the regulation there is conjunctive „and”, what in logics clearly indicates conjunction, therefore in analysis of this regulation one can go further and state that not only technologies are covered by transfer to economy but not only the results of scientific conferment and development works and also the universities should provide research and development services to entities operating in the business sector. Art. 86, 86a, as well as art. 86b-86i are also very important provisions of the Higher Education Act, because these are specific provisions regarding commercialization of scientific research results and their transfer to economy. Legislator states in art. 86 section 1 that universities may operate academic incubators of entrepreneurship and technologies transfer centers. This provision aims at encouraging the universities to establish entities which are to popularize scientific research results, support business activity of the university as well as to increase its revenues (Izdebski, 2015). Academic incubator of entrepreneurship pursuant to art. 86 section 3 item 1-2 may be established in a form of a university-level administrative unit which is supposed to operate „pursuant to the regulation approved by the university senate” or a capital company operating pursuant to the system documents. Centre of technology transfer pursuant to art. 86 section 4 is to be established for direct commercialization and may take a form of a university-level administrative unit operating „pursuant to the regulation approved by the senate of the university, and in case of a non-public university – by an organ pointed out in the statute” (art. 86 section 5). If an academic incubator of entrepreneurship or centre of transfer of technology is established in a form of university-level administrative units, then obligatorily „the supervisory boards are established, whose composition and competences are specified appropriately in their statutes” (art. 86 section 6). Also, the indirect commercialization is possible, whose legal framework are outlined by art. 86a, in which the legislator decided that for this purpose a university may establish only a one-member capital company (special purpose company), which in the legal doctrine is treated as the implementation of an idea of company of the spin-off type (Izdebski, 2015). In order to cover the share capital a university: „may bring in the non-monetary contribution in whole or in part in a form of scientific research or developmental works, especially being an invention, utility model, industrial model or topography of integrated circuit, cultured or discovered and grown species of a plant, and know-how related to these results” (art. 86a section 1). The special purpose company is established by a rector with the senate’s consent, and in non-public universities by an organ appointed in the statute. University may establish many special purpose companies, as well as to entrust such a company in a form of paid or unpaid contract: „management of rights to results or know-how, referred to in section 1, in the scope of direct commercialization”. Pursuant to art. 86a section 4 a university is obliged to earmark the paid special purpose company dividend to its statutory activity. Moreover, a legislator in art. 86b allows for setting up special purpose companies by several public or non-public universities, as well as universities joining the established companies, but public universities cannot establish joint companies with non-public universities. Legislator in art. 86c-86i regulates detailed issues connected with a procedure of

commercialization of scientific research results. Summing up this part of consideration one must find that the legislator allows for two methods of commercialization: direct – by selling the test results, developmental works or know-how „connected with these results or transferring these results or know-how for use, especially on the basis of a licensing agreement, lease and rental” (art. 2 section 1 item 35), and for this purpose a university may establish centers of transfer of technology or academic incubator of entrepreneurship and indirect – by taking up shares or stock in companies intending to implement or prepare for implementation „the results of scientific research results, developmental works or know-how connected with these results” (art. 2 section 1 item 36) , and for this purpose the only form allowed by the Polish law is the establishment of a one-member capital company. An important novelization of the Higher Education Act of 21 April 2017 on the amendment of the act on scientific degrees and scientific titles and degrees and titles in the scope of art and some other acts (Dz.U. – Journal of Laws - of 2017 item 859), which introduced to the Polish law the implementation doctorates, which are present, inter alia, in France, Denmark, Germany, Great Britain), which strengthen the cooperation between universities and business, and also strengthen a process of transfer of knowledge and technology from the university to businesses.

#### **4. DEFECTS OF EXISTING SOLUTIONS IN THE SCOPE OF COOPERATION BETWEEN UNIVERSITIES AND SOCIAL AND ECONOMIC MILIEU IN POLAND**

In Poland the progressive GDP growth is being observed, however it does not translate to the significant growth of innovation, i.e. commercialization of scientific research results (R&D) remains still at the low level – pursuant to the ranking Innovation Union Scoreboard Poland is on the 25<sup>th</sup> place out of 28 EU countries (European Commission, 2017). In Poland one can observe joint projects of universities with the business world, however they are still few, taking into consideration the vast potential and human resources of Polish universities, as well as needs and possibilities of Polish companies. Universities more often take advantage of indirect than direct commercialization. One must also emphasize the fact that in many Polish universities many innovative ideas and prototypes are created, especially in the field of medicine and modern technologies, however, innovative high-tech industry, weakly developed in Poland poses a large problem. This is why usually innovations which were created in Polish universities either remain unutilized or underutilized or are sold abroad and implemented there. The basic problem in Poland is an undeveloped high-tech industry, despite the fact that Polish scientists yield creative innovations. The basic barrier is low financial support or the lack thereof. Another barrier are also some legal regulations, including internal procedures of commercialization (Kwiek, 2016). Sometimes an unfavourable factor is a deficit of entrepreneurial approach (Radwan, 2017), excessive conservatism and lack of openness in mutual cooperation of the Polish business with universities. Universities also commit errors (Radwan, 2017). Universities should facilitate the participation of business in university authorities as well as on the side of a company, which should expand its structures with human resources such as scientists. Moreover, the current cooperation of university with businesses is of individual character, arising from the opened personal contacts of scientists with businessmen. Relations between universities and companies should be of institutional character. Currently the cooperation of a university or individual academics with the business world is restricted mainly to conduct assigned expertise which should be one of the forms of cooperation, but certainly not the only one. The problem is also the excessive scattering of universities, consolidation of universities would contribute to the development of cooperation with business. Centres of transfers of technology existing at the universities often do not fulfill their role. Also, another problem is an issue of ownership of innovations, commercialized results of scientific tests (especially in the scope of patents), as well as the lack of qualified specialists in the scope of intellectual property right and patents in the administrative structure of Polish universities.

## **5. REFORM OF HIGHER EDUCATION IN POLAND IN A CONTEXT OF COOPERATION OF UNIVERSITY WITH BUSINESS**

Minister of Science and Higher Education, on the basis of an announcement of 23<sup>rd</sup> February 2016 on establishment of a project named „Act 2.0 – Assumptions of the higher education system reform" (M. P. item 191) announced a competition to develop the assumptions for higher education system reform in Poland, as a result of which three teams were selected. Moreover, the Minister of Science and Higher Education presented on the National Congress of Science, which was held in Krakow from 19 to 20 September, the final draft of the higher education system reform. In the draft developed by H. Izdebski's team (Izdebski, 2017) the attention is drawn to the fact that the new act must create conditions to commence close relationships between universities and business in the scope of „educating personnel, joint research, popularization and spreading knowledge, implementation of innovative solutions". Moreover, universities implementing the third mission should be rewarded. Also, the dynamization of processes of transfer of knowledge and test results into economy are of key importance, as well as creation of mechanisms and institutions contributing to commercialization. The team postulates that a collegial organ should be established at universities, representing external stakeholders, which should receive competences to issue opinions and take initiatives in the scope of transfer of research and development works. Revenues from commercialization should be universities' own income. One may state, therefore, that the draft uses very general forms and program norms in the scope of commercialization of scientific research results. In the project managed by M. Kwiek (Kwiek, 2016) a wide spectrum of problems was perceived in the relations of universities with business. The team suggests the following solutions: increasing the autonomy of the rector regarding the efficient management of relations of a university with business, simplification of a process of commercialization, increasing the openness to cooperation with social and economic milieu by, i.a. conducting the lectures by persons connected with business, development of the ordered specialties, strengthening of a staff-promoting system (e.g. promotions, degrees and scientific titles) for e.g. commercialization of „results of scientific research and investment of companies in educating and research and development activity in university", as well as facilitating tenders for new technologies in pre-commercial forms (amendment of the Public Procurement Law), clear principles of settlement of costs and revenues from commercialization, defining the intellectual property law at commercialization (enfranchisement of scientists), restriction of EU funds for financing academic incubators of entrepreneurship and centres of transfers of technologies, as well as financing of technological parks from public funds. Moreover, the third task (next to the scientific activity and educating) of research universities should be the transfer of knowledge and innovation to economy and cooperation with business (Kwiek, 2016). One can state, though, that the project assumes the systemic and structural changes on Polish universities. In the project directed by A. Radwan (Radwan, 2017) the solutions were suggested which are to enhance the cooperation of a university with social and economic milieu and increase the commercialization of scientific research and transfer of knowledge and technology to economy. The project assumes that the representatives of business should be in the Trustee Board and also there should be a position of a Vice-president for cooperation with social and economic milieu. Cooperation with business should be the third mission of a university and should take place in three areas, through i.a., research and development projects, consultations, bilateral exchange of knowledge, didactics by i.a. joint formation of syllabuses, conducting seminars in the universities by persons practising business, internships of academics in companies as well as corporate culture by, i.a. organization of open lectures, cultural events, commercialization of knowledge and technologies, commercial availability of external infrastructure to third parties. Moreover, the financial issues are of key importance, including

the financing of research works and research and developmental works (triple helix model – University, business partner and possibly the State Treasury). The team also suggests, i.a. , the consolidation of centers of technologies transfer and their functioning as internal entities with a large degree of autonomy, promoting cooperation of universities with business, establishment of spin-off and spin-out companies, support of scientists conducting commercialization-oriented research, support to the sector of small and medium companies in the scope of transfer of knowledge and technology, founding the White Book of Innovations establishment of a platform of transfer of technologies, commercialization of results of research and knowledge and cooperation with business which should be taken into account when assessing an academic staff member (promotions, awards, grants), as well as parametrization of a university. One may state that the project assumes structural changes, including those which are connected with culture of entrepreneurship in Poland. An issue of commercialization of scientific research results, as well as transfer of knowledge and technology to economy was also regulated in an official draft of a new act – Higher education and science act (Draft of 16.09.2017 – Higher education and science act (<http://konstytucjadlanauki.gov.pl/content/uploads/2017/09/projekt-ustawy-prawo-o-szkolnictwie-wyzszym-i-nauce-16092017-v1.pdf>)). In art. 2 of the draft there is a provision on the third mission of a university such as: „participation in social development and creation of economy-based innovations”. Among the primary tasks of a university listed in art. 11 section 1 in item 7 there is: „conducting the scientific activity, provision of research services and transfer of technologies to economy”, which is very similar to the current art. 13 section 1 item 3 of the Higher Education Act. A new regulation contained in the draft is art. 65 stating that: „University may conduct dual studies with a practical profile with participation of entrepreneurs. Organization of studies will be specified in an agreement concluded in a written form”. This is for sure a provision expanding the cooperation of a university with entrepreneurship. In the draft of this act the initiators placed chapter 6 in part II titled: commercialization of scientific results, developmental works and know-how, which includes the regulations of art. 156-167. These regulations are similar to art. 86-86i of the currently effective act and concern, i.a., the academic incubators of entrepreneurship, centres of transfer of technology, special purpose vehicles, entitlements of organs of the university in this scope, procedures of commercialization of research results and property issues. Among more important differences one could point out: the possibility of establishment of capital companies by universities or federation universities (a new form contained in the project) of capital companies for „realization of entrepreneurship from the scope of research infrastructure or their management” 9 art. 167 section 1), as well as a regulation of art. 157 section 3 item 2 facilitating the entrusting by a university or a federation university of the "management of research infrastructure" to a special purpose vehicle in a for of paid or unpaid agreement. *Sui generis* opening of a university to its social and economic milieu may be also expressed by the establishment of the council of the university as an organ of the university, which is to be composed of more than 50% of persons from outside of a university (art. 20 section 2), however, it has not been specified where they are to come from, so equally well it may be also an organ which is still closed for representatives of the business world. Summarizing one can state that the official draft of the act does not contain any regulations which would be radically different in the scope of cooperation of a university with business and commercialization of results of scientific research from the currently effective act, and the differences are of detailed character, therefore *status quo* may remain in practice.

## 6. CONCLUSIONS AND RECOMMENDATIONS OF SPECIFIC SOLUTIONS

Key conclusion pertains to a necessity of cooperation between universities and social and economic milieu, especially the enterprises in the scope of implementation of scientific research results, which should be subjected to a process of commercialization in order to provide a

transfer of knowledge, technology and innovation into economy. Orientation to cooperation of a university and business will contribute to the economic development of the state. Innovations developed by scientists may be implemented into the widespread use, what is possible through a manufacturing process implemented in enterprises. Moreover, innovations should be implemented by domestic entrepreneurs and not sold abroad, what will significantly impact the economic development of Poland and the GDP growth. Both the effective Higher Education Act as well as an official project of reforms of the Polish higher education on one hand creates certain possibilities of commercialization, on the other side omits significant issues.

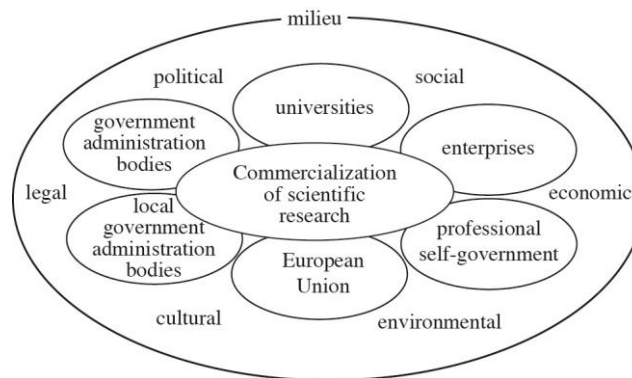


Figure 1: Model of commercialization of scientific research in social and economic milieu  
(own study)

From the point of view of efficient management of the university also in the scope of cooperation with business, academic governance is of key importance (Kozien, Kozien, 2017). Therefore, in bodies of the university the participation of social and economic milieu should be provided, which would cooperate with a university, e.g. within the drafted council of the university. There should be also a position of a vice-rector for cooperation with business and commercialization of scientific research results. The university should provide a high level of scientific research, whose results and innovations should be transferred to enterprises, as well as implement the projects, expertise, ideas for development, assigned by entrepreneurs. In the administration of the university qualified lawyers should be employed (also the specialists in the scope of economic law, intellectual and industrial property and patent attorneys) as well as economists, responsible for legal and economic aspects of commercialization of scientific research results. Centres of transfer of technologies and academic incubators of entrepreneurs should be internal auxiliary units which honestly implement their tasks, as well as subjected to the vice-rector for cooperation with business and commercialization with business and commercialization of scientific research results. Also, the consolidation of a university should be performed, what will also contribute to the more effective cooperation of a university with business. Also, the so-called „enfranchisement” of scientists should be implemented, what would mean that the right of ownership belongs to of a scientist or a group of scientists, whose research results are commercialized, and a transfer of knowledge and technology to economy counts towards individual promotions and assessment of academics and to parametrization of a university, which should receive an increased subsidy also for a degree of commercialization. Also, a simplification of law and shortening of a patent and commercialization procedures is of key importance. Entrepreneurs should be opened for cooperation with universities and apart from implementation and production of innovations which were invented in universities they should assign specific research, expertise and ideas for development. Also, the representatives of the universities should be included in the authorities of enterprises cooperating with universities. One should also develop high-tech industry in Poland, and entrepreneurs should

in principle invest in innovations, and not act conservatively. Cooperation in the scope of mutual exchange of knowledge should be implemented in a form of training and lectures, e.g. representatives of business may conduct practical classes in universities, whereas scientists may conduct trainings and lectures for entrepreneurs and employees of enterprises. Social and economic milieu should also provide financial means for research conducted by the university, whose results are to be commercialized.

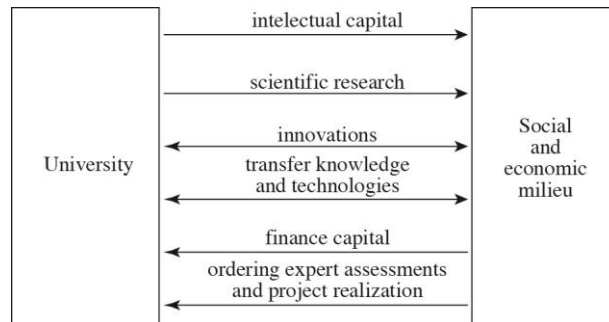


Figure 2: Elements of relation between universities and business (own study)

Cooperation of a university with the social and economic milieu is very important for the development of a university, enterprises and the state, this is why it requires legal regulations. Moreover, it is necessary to create a culture of entrepreneurship in the society, what is a long-term process, however attainable, what the examples of solutions applied in the United States and Great Britain can testify to.

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## THE MULTIDIMENSIONAL NATURE OF MANAGING THE VALUE OF A TOURIST ENTERPRISE

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### **ABSTRACT**

*The development of a market economy, globalization and increasing competition make companies operate in conditions of uncertainty, which requires the efficient and effective management. Until recently, financial analysts drew on data from the balance sheet and the profit and loss account. In current situation you must reach for information not only about the static nature, but also for dynamic information. The source of such information may be the cash flow report. The value management of the tour operator will include three components. The first component will be the capital invested, which is associated with the strategy for the management of enterprise financial liquidity, the second one will be economic gain, that is to eliminate the disadvantages of the accounting profit. Finally, the third will be free cash flow.*

**Keywords:** *capital invested, value of enterprise, free cash flow, accounting profit*

### **1. INTRODUCTION**

The variability of the environment where enterprises identified as tourist establishments operate demands from them significant managerial and analytical skills and, above all, requires the development of adequate strategy. Strategy, as an economic category, was taken over from the military, where it defined the entirety of practical and theoretical activities pursued in preparation for and while waging war. According to M. Marchesnay, strategy embraces reflections, decisions and actions aimed at defining general objectives and then specific tasks, but also the selection of the means to achieve those objectives and, in consequence, the performance of particular activity, controlling the outcomes involved in its performance and the achievement of the objectives<sup>1</sup>. A. D. Chandler defined strategy as “the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals”<sup>2</sup>. In turn, C. Hayden defined strategy as an approach to the use of resources in the business environment so that the goals of an organization can be fulfilled<sup>3</sup>. In economic sciences, theories related to economic growth on the one hand and theories of enterprise development on the other occupy a special place. They share the notion of value<sup>4</sup>. In the late 20<sup>th</sup> century, management theorists and practitioners began to advocate a closer connection between business management and shareholder value creation. Shifting the focus from maximizing profit to maximizing shareholder value changed the approach to enterprise performance evaluation. Value management in a tourist enterprise requires control on three levels:

1. Capital employed.
2. Operating profit.
3. Cash flow.

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<sup>1</sup> Cf. M. Marchesnay, *Zarządzanie strategiczne*, Poltext, Warszawa 1994, p. 14;

<sup>2</sup> Cf. A.D. Chandler, *Strategy and Structure*, Cambridge: MIT Press, 1962, p.123;

<sup>3</sup> Cf. A. Kaczmarek, *Strategia działania małych i średnich przedsiębiorstw*, Zeszyty Naukowe Małopolskiej Wyższej Szkoły Ekonomicznej w Tarnowie No. 2(13)/2009, v.2, p.259;

<sup>4</sup> Cf. A. Gondek, *Wartość, jako kategoria łącząca teorie wzrostu gospodarczego z teoriami przedsiębiorstw in: Zeszyty Naukowe Uniwersytetu Szczecińskiego No. 855, Finanse Rynki Finansowe, Ubezpieczenia No. 74, v.2, szczecin 2015, p. 223;*



The implementation of the value management system is justified by numerous benefits for shareholders<sup>5</sup>:

1. Shareholder value creation is conducive to attracting new investors.
2. Value is the best measure of performance.
3. Value management system prevents the "value gap" allowing a hostile takeover.
4. It acts as a managerial control system.
5. Focus on shareholder value ensures a growth in value for all groups of stakeholders.

The evaluation of the business objective of an enterprise means that in the long term this objective will be an increase in the value of an enterprise, while in the short term it will be financial liquidity. This, in turn, causes that financial management, in particular liquidity management, will be one of the key management areas.

## **2. CAPITAL EMPLOYED AS THE BASIC ELEMENT OF VALUE MANAGEMENT**

The concept of capital evolved together with the development of management, accounting and finance. The origin of the term "capital" goes back to the ancient Rome, where it meant "the sum that is the subject of the loan"<sup>6</sup>. Originally, the term referred to the sum of the loaned money, in order to distinguish the principal from the interest due<sup>7</sup>. The founder of capital theory is F. Quesnay, who introduced the notion of capital as wealth accumulated in order to conduct further production<sup>8</sup>. L. Pacioli, the father of accounting, wrote that "capital means the entire amount of what you now possess, it means your money, your share or your bag of money"<sup>9</sup>. Capital was also defined by S. Gamersfelder: "You want to start trading, take stock, noting down everything you need for trading, accurately and in sequence. First, how much cash you have, then the goods you own, how much each one costs, your debtors, each entered separately with how much they owe you and when they have to pay. But take down your creditors too, whom you yourself are liable to. This will be your main property – or capital"<sup>10</sup>. Equity is the share of an individual in the assets remaining after deducting all liabilities and provisions. It is, therefore, a synonym for net assets. The Accounting Act defines equity (net assets) as "the assets less the liabilities"<sup>11</sup>. L.H. Sloan argued that the return-on-investment ratio is a key barometer for future business success<sup>12</sup>. According to Sloan, capital employed corresponds to the value of the assets less the liabilities that are not burdened with cost. N. Roztocki defines capital employed in a similar way, but he indicates that invoiced payables and accruals are to be deducted from total liabilities<sup>13</sup>.

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<sup>5</sup> Cf. J. Kuczowic, Kategorie wartości biznesu w zarządzaniu małym przedsiębiorstwem, Zeszyty Naukowe Uniwersytetu Szczecińskiego, Rynki Finansowe, Ubezpieczenia No. 79, Szczecin 2015, pp. 268-269;

<sup>6</sup> Cf. E. Maćkowiak, Model przekształcenia sprawozdania finansowego na potrzeby zarządzania wartością przedsiębiorstwa, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2013, p. 66;

<sup>7</sup> Cf. J. Gierusz – Koszty i przychody w świetle nadrzędnych zasad rachunkowości, Pojęcia, klasyfikacja, zakres ujawnień, ODDK, Gdańsk 2006, p. 219;

<sup>8</sup> Cf. Wielka Encyklopedia Powszechna, 1965, pp.443-444;

<sup>9</sup> Cf. M. Scheffs – Z historii księgowości (Luca Pacioli), Poznań 1939, p.26;

<sup>10</sup> Cf. J. Gierusz, A. Kaiser, R. Pałczyńska – Gościński – Księgowość w Gdańsku w XV i XVI wieku, Acta Cassubiana tom I, Gdańsk 1999, p.56; E. Maćkowiak, Model przekształcenia sprawozdania finansowego na potrzeby zarządzania wartością przedsiębiorstwa, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2013, p. 66

<sup>11</sup> Accounting Act Art. 3 paragraph 1 item 29;

<sup>12</sup> Cf. Goetzmann W.N. Garstka S.J. The Development of Corporate Performance Measures: Benchmarks Before EVA , <http://papers.ssrn.com>;

<sup>13</sup> Cf. Makelainen E. Roztocki N. Economic Value Added (EVA) for Small Business, 15.06.1998, [www.evonomics.com](http://www.evonomics.com);

D. Davis defines net capital employed as assets less current liabilities<sup>14</sup>. Biddle, Bowen and Wallace propose a more complex formula for calculating capital employed when they argue that capital employed is calculated as the sum of assets less interest-free assets plus capital equivalents, i.e. the current value of future payments for the operating lease. Coppeland, Koller and Murrini define capital employed as funds invested in the operating activity of an enterprise, excluding cost and tax provisions, interest-bearing foreign capital and non-operating assets such as goodwill, fixed assets under construction or securities held for trading. In literature, e.g. in the field of economic value added, the category of adjusted capital employed is used. The value of adjusted capital comprises the adjusted value of equity and the adjusted value of interest-bearing debt capital. As a result, interest-free debt capital (current liabilities, accruals and provisions) is excluded. Such adjustments aim at transforming the book value into economic value, while at the same time determining the actual amount of capital employed<sup>15</sup>. The first element of the value management system quickly delivers complete information, which – in the case of working capital problems or total funding – will indicate where the problem originates. Capital employed and total funding, or – to be more precise – their level, are of paramount importance, on the one hand, for companies operating during the economic crisis, but on the other hand, the information is also valuable in such volatile and unpredictable markets as nowadays. In a sense, it can be argued that the information obtained is “pure” information that is free from interventions aimed at improving the enterprise’s financial performance. The best example of such interventions, the goal of which is to improve the enterprise’s perception, is setting up or dissolving provisions that are not really necessary.

### 3. ENTERPRISE VALUE MANAGEMENT USING OPERATING PROFIT

The second element of the enterprise value management system will be the financial result. As was the case with capital employed, the primary source of information about operating profit is the financial statement. However, the interest will not be focused on the overall result, but on operating profit. The use of net operating profit allows for the exclusion of all the elements of remaining activity. The drawbacks of the financial result include<sup>16</sup>:

1. The possibility of controlling and influencing the financial result by applying different valuation principles.
2. Profit is not equivalent to cash.
3. The financial result is based on historical data.
4. The cost of alternative capital is omitted.
5. Accounting profit is not correlated with maximizing shareholder value.

In many cases, in the initial period of trading, the accounting profit of an enterprise is small or an enterprise makes a loss. It is only after some time that production capacity is used at the adequate level and an enterprise makes a profit. Additionally, accounting profit can be easily

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<sup>14</sup> Cf. Davis D. *Sztuka zarządzania*, PWE, Warszawa 1993, p.48;

<sup>15</sup> Cf. Hamrol M. *Analiza finansowa przedsiębiorstwa ujęcie sytuacyjne*, Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2004, p.223;

<sup>16</sup> Cf. E. Maćkowiak, *Model przekształcenia sprawozdania finansowego na potrzeby zarządzania wartością przedsiębiorstwa*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2013, pp.53-55, B. Micherda, *Kwantyfikacja wartości głównym posłaniem rachunkowości*, Materiały konferencyjne: *Wartość i wycena w ekonomii i rachunkowości*, Katowice 2008; E. Maćkowiak, *Model przekształconego sprawozdania finansowego jako narzędzie zarządzania wartością przedsiębiorstwa w małych, średnich i dużych przedsiębiorstwach – głos w dyskusji*, in: *Finansowe uwarunkowania rozwoju organizacji gospodarczych. Zarządzanie finansami a efektywność ekonomiczna*, Wydawnictwo Uniwersytetu Warszawskiego Wydział Zarządzania, Warszawa 2015, pp.58-59;

maximized in the short term at the expense of more distant reporting periods<sup>17</sup>. These drawbacks of profit make it an adequate measure of the value of an enterprise operating in the tourist industry. The alternative is to transform the accounting financial result so that the actual profit earned by an enterprise is known and use it as the key element in an enterprise value management system. On the whole, accounting profit cannot be used as a basic criterion for assessing work efficiency, nor can it be a measure of how effectively an enterprise achieves its business goals in a market economy. This applies equally to the short and long term objectives. Business owners expect to be paid for capital contributed to the enterprise adequately to the risk that they are prepared to take. The use of operating profit in the enterprise value management system means that it can be assumed that profit maximization should be the primary objective of the enterprise's activity. Moreover, operating profit will be the source of the growth in the value of the enterprise. The important function of operating profit is the reason why it becomes the second element in managing the value of an enterprise, since the problem of every firm is not to maximize profit, but rather achieve sufficient profit to cover the risk of economic activity, allowing it to avoid losses. Operating profit is determined based on the net operating result, as this category represents the value creation of the enterprise. It seems, however, that the most appropriate category of profit should be EBITDA, as it is determined only and exclusively in the area of core operating activity. At the same time, this category excludes one-off income and expenses.

#### 4. CASH FLOW MANAGEMENT

The development of the market economy, ongoing globalization, and growing competition cause that enterprises operate under uncertainty, which requires from them efficient and effective management. Until recently financial analysts worked based on the data included in the balance sheet and the profit and loss account. In the current situation, it is necessary to use not only information static in nature, but to reach out to dynamic information. The source of such information can be the cash flow statement. Enterprises operating on the market, in their day-to-day operations involving such activities as the supply of raw materials, components or merchandise, the sale of manufactured finished goods, the settlement of current liabilities and the inflows of receipts, manage their cash flows on an ongoing basis<sup>18</sup>. According to K. Somey, "cash and cash flows are for a business what blood and blood circulation are for the human body". Forlane, in turn, argues that "whatever you do, remember that cash is the cornerstone and direct measure of financial success, stemming from the firm's achievements in time"<sup>19</sup>. According to B. Vause, the cash flow statement is the most valuable source of information for managing the enterprise's finances<sup>20</sup>. The current activity of an enterprise requires a certain amount of cash or cash equivalents. These funds participate in the circulation of capital (in the circular flow of capital), similarly to other working assets, going through the phases of supply, production and sales<sup>21</sup>. According to S.A. Ross, R. Westerfield and B.D. Jordan, cash management is close to the cash flow optimization mechanism. For J. Czekaj and Z. Dresler, the management of cash resources is aimed at minimizing the cost of their employment.

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<sup>17</sup> Cf. W. Jaki, A. Paździor, Zarządzanie finansowe w przedsiębiorstwie, Politechnika Lubelska, Lublin 2011, p.12;

<sup>18</sup> Cf. A. Zbaraszewska, Rola rachunku przepływów pieniężnych w zarządzaniu małymi jednostkami gospodarczymi, Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania nr 24, Gospodarka, Zarządzanie i Środowisko, Szczecin, p. 220;

<sup>19</sup> Cf. Snieżek, Sprawozdawczość przepływów pieniężnych – krytyczna ocena i propozycja modelu. Rozprawy Habilitacyjne Uniwersytetu Łódzkiego, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2008, pp.116, 94-95;

<sup>20</sup> Cf. B. Vause, Guide to Analysing Companies, Economist Books 4<sup>th</sup> edition, 2005, p. 201;

<sup>21</sup> Cf. M. Krajewski, Kierunki analizy struktury majątku obrotowego w przedsiębiorstwie, [in:] Materiały konferencji naukowej: Przedsiębiorstwo na rynku kapitałowym, pod redakcją Jana Duraja, KAiSP, Łódź 1998, p. 519.

According to Krzemińska, the purpose of cash management is to reduce its resources in the enterprise and thereby raise profitability, without decreasing economic activity and exposing the enterprise to additional risks. Measures to achieve this goal are as follows<sup>22</sup>:

- shortening cash flow cycles,
- settling obligations on time,
- allocating surpluses in a way ensuring benefits,
- acquiring the cheapest sources of finance to cover cash shortages.

While conducting economic activity, the owner has to ensure financial liquidity. Its lack leads to the loss of the ability to settle current liabilities. Therefore, the efficient running of an enterprise requires the generation of cash that allows for the development of the enterprise. Accordingly, the management of the firm should aim to<sup>23</sup>:

- achieve the necessary cash surplus,
- shape the size of cash flows in a manner that will ensure financial equilibrium,
- distribute cash flows effectively over time,
- minimize or eliminate the risk of insolvency.

While the amount of profit reported by the enterprise depends also on its balance sheet policy, cash flows reflect the actual value of cash streams generated by the enterprise. The cash flow statement presents information qualitatively different from the way the information is presented in the balance sheet or the profit and loss account.

## 5. CONCLUSIONS

Profit maximization can be achieved relatively easily in large enterprises. This can be done through the positive influence of the owner of the enterprise seeking to increase sales revenue with the use of the appropriate policy of financing by its customers or by means of trade credit or reduced operating costs. In the case of small and medium-sized enterprises, it is slightly more difficult to influence the price of the products. This goal is not free from weaknesses because a certain level of profit can be achieved by reducing costs and/or increasing revenue. Cost savings can be achieved by limiting advertising expenses, research and development expenditure, or employee training outlays. Revenues can be increased by the reduction in or sale of the enterprise's assets. However, such steps result in short-term effects. The adoption of continued operation as the primary goal of the enterprise causes that the basic threat is to strive for the survival of the enterprise at any cost, despite incurring huge losses. The effectiveness of enterprise management depends on the adequately and clearly defined objectives that the enterprise wishes to achieve. Despite many different goals, it is assumed that the owner of the enterprise should identify both maximizing the benefits in the form of the wealth for the owners and the survival of the enterprise as the ultimate goals. They do not exclude specific objectives, such as<sup>24</sup>:

- making a profit,
- maintaining liquidity,
- increasing equity.

However, maximizing shareholder value also means performing all these specific objectives.

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<sup>23</sup> Cf. T. Kiziukiewicz, Sprawozdanie z przepływu środków pieniężnych w zarządzaniu finansami wg ustawy o rachunkowości i wytycznymi ministra finansów, Ekspert, Wrocław 1995, p. 7;  
W. Gos, Przepływy pieniężne w systemie rachunkowości, Raporty i Studia t. CDLXXIII, 399 Uniwersytet Szczeciński, Szczecin 2001, p.28;

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## CHALLENGES AND POSSIBLE SOLUTIONS IN DIFFERENT STAGES OF PUBLIC FOOD PROCUREMENT

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### **ABSTRACT**

*Public food procurement is a complex system that includes activities from procurement planning to the complete fulfillment of contractual obligations. And both purchaser and potential supplier faces with a multitude of factors to be taken into account on each of the procurement phases. The research aim is to identify the main problems in each of the stages of procurement and to identify possible solutions to mitigate the problems. In Procurement process, the author identifies three main stages, which are essential for a successful and efficient procurement - procurement planning, selection of evaluation criteria and performance of the contract. Latvian largest food purchasers through public procurements are local governments or their authorities and procuring goods is not their primary function. So the biggest challenge for local governments at all stages of the procurement is insufficient level of knowledge. On the other hand there are challenges regarding to suppliers, for example, small producers are not competitive to participate in the public procurement of food, they can't provide high-quality products in relevant quantity all the year, and also lack of knowledge on how to sell their products to schools and other local authorities. The following research methods were employed to carry out the present research: analysis and synthesis, induction and deduction, the monographic method and the graphic method.*

**Keywords:** *Local food, Local municipalities, Public food procurement*

### **1. INTRODUCTION**

EU public procurement policy is an important instrument for building a single market and for achieving smart, sustainable and inclusive growth in line with the Europe 2020 strategy while ensuring the most effective use of public funds (Europe 2020, 2010). Public procurement in the European Union is governed by EU public procurement directives laying down common rules and procedures to be followed by public sector bodies in high value procurement: Directive 2014/24 / EU of the European Parliament and of the Council of 26 February 2014 on public procurement and which is repealing Directive 2004/18/EC, which aims to modernize and specify existing public procurement rules, also taking into account the case-law of the European Court of Justice on public procurement and its developed understanding of the content of the previous directive; and Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors and which is repealing Directive 2004/17/EC, which lays down similar provisions for the inclusion of environmental criteria in public procurement, as well as complements the current regulatory framework, including a detailed regulation for life cycle costing. Similarly, each Member State issues a legislative package regulating the procurement process in the respective country. Public procurement in Latvia is regulated by the Public Procurement Law (Public Procurement Law, 2017), which entered into force on 1 March 2017 and which includes the requirements of the above-mentioned EU directives. There are also various Cabinet regulations that regulate specific areas of procurement and types of procurement.

From the abovementioned normative acts the basic principles of public procurement are concluded. These are the transparency of the procurement procedure, the free competition of suppliers and equal treatment of them, as well as the effective use of state and local government funds. The central idea of public procurement law is to ensure equal treatment of the procurement subject matter, which excludes unfair competition between tenderers, granting of advantages to a particular tenderer over other competitors. Thus, the main objective of public procurement framework - to save public funds - is attained. Large-scale procurement by private and public companies has been overlooked as a means to strategically and tactically develop national industries and generate employment. Procurement regulations, contracting strategies, vendor pre-qualification, technical standards, bid documents, tender evaluation criteria and contract conditions: all these instruments of procurement can be formulated creatively to build national competitiveness through capital investment, technology transfer and skills development (Warner, 2011). The European Court of Auditors carried out an audit which examined whether the Commission and the Member States are taking appropriate and effective measures to deal with public procurement mistakes in the field of cohesion policy. (European Court of Auditors, 2015). The audit concluded that there are various causes for procurement errors: complexity, lack of administrative capacity, and lack of planning. There is a certain degree of complexity for any public procurement system. However, the complexity of the current legal and administrative framework is considered a problem. Accordingly, 90% of the 69 audit institutions that participated in the survey conducted for this audit pointed out that the public procurement rules in their country are more complicated than they should be. Respondents in the survey indicated that the main causes of the errors are the large volume of legislation and/ or guidelines, the difficulty of their practical application and the lack of knowledge of how the public procurement procedure is carried out. Almost half of the respondents indicated that simplification of procedures could be a key measure for improving public procurement practice. The aim of this research to identify the main problems in each of the stages of procurement and to identify possible solutions to mitigate the problems.

## **2. PROCURERS' CHALLENGES AND DIFFICULTIES IN THE DIFFERENT STAGES OF THE PROCUREMENT PROCEDURE**

One of the most recent topics for European researchers (Lundberg et.al., 2013, Smith et.al., 2016, Witjesa. and Lozanoa, 2016) is public Procurement and Green Public Procurement (GPP) issues. Public procurement is a complex and complicated system with lots of stakeholders and complicated documentation. As such researchers like Morgan and Sonnino (Morgan and Sonnino, 2007) highlight, public procurement is complex because on the one hand it's necessary to ensure competitiveness and free trade criteria, and on the other hand, there should be included environmental sustainability and social ideal-providing criteria.

As shown in Figure 1, any procurement process has several stages:

- 1) Procurement planning
- 2) the pre-purchase phase;
- 3) Procurement process;
- 4) management of the procurement contract.

Each of these steps takes a certain time. Although the Public Procurement Law defines the procurement method, procurement stages and deadlines (for preparation of tenders, conclusion of contracts, etc.), it does not regulate how long the procurement documents are prepared, how long does it take for the composition of the procurement commission and decisions of the need for experts, nor how much time a procurers should have to evaluate the submitted tenders and make a decision. However, time is not the only obstacle faced by procurers.



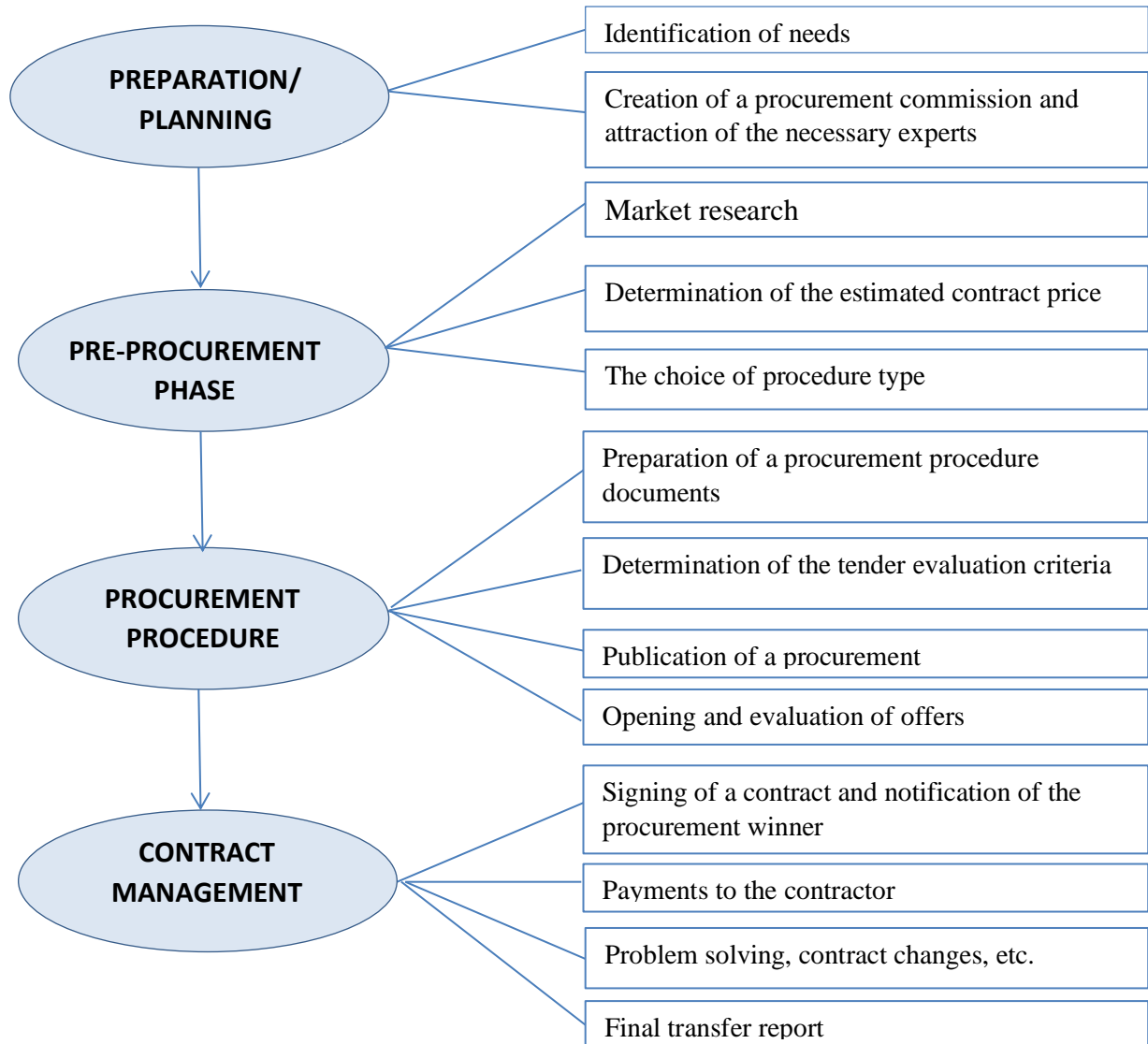


Figure 1: Stages of public procurement (author's construction)

The specific actions of each phase depend on the applicable procurement procedure and at each stage of the procurement, the contracting authority must take into account the requirements specified in the regulatory enactments as well as face several challenges.

### 2.1. Procurement planning and preparation, pre-purchase phase

Careful procurement planning should be done before starting a procurement procedure. At this stage procurer needs are identified, it is decided whether the Green Public Procurement requirements will be applied and also assess whether it is possible to conduct e-procurement through the Electronic Procurement System by purchasing part of the necessary food products. According to a report for the European Commission prepared by the audit firm PwC on Corruption in EU Public Procurement (Wensink, de Vet, 2013), through e-Procurement one can:

- a) promote competition and the efficient use of resources by expanding access to procurement in the single market, including small and medium-sized enterprises;
- b) improve the efficiency of public procurement management by expanding access to procurement and automating key procedures that could lead to cost savings for both tenderers and contracting authorities;
- c) help detect and prevent irregularities, corruption and fraud.

It is positively appreciated that in the Transitional Provisions of the new Public Procurement Law, in Latvia, from 2019 all procurements including procurements made by local governments should be provided for submission of electronic applications and tenders. As a next step in procurement planning, there is the creation of a procurement commission and the attraction of specialists for the development of a technical specification. As a rule, municipalities have a single procurement commission for all local government purchases, and is not created for specific procurement. Consequently, a situation arises when members of the Procurement Commission have to be specialists in a wide range of issues, and the range of municipal procurement subjects is very wide. Such situations where in the procurement committee have the same people who often have some other positions in the municipality leads to the following problems:

- 1) There is a lack of specialized knowledge of regulatory enactments of procurement or in the field of public procurement, therefore there are poorly prepared procurement documents, sketchy and incomplete technical specifications;
- 2) Due to the lack of knowledge, officials often choose tenders to be valued at the lowest price rather than the most economically advantageous principle;
- 3) Experts may be personally interested in procurement results;
- 4) It is not enough of time for the Procurement Committee to carefully evaluate the tenders.

In order to improve the work of the procurement commission, the Procurement Monitoring Bureau organizes training for members of procurement committees, in particular about the division of procurement into lots, the inclusion of GPP criteria in food procurement, and also develops various samples and guidelines for qualitative accomplishing of food procurements. Similarly, The Latvian Rural Advisory and Training Center (LRATC) which is the largest provider of consultancy services in Latvia, promotes local produce sales through local government food procurements, as well as advising municipalities on the preparation of procurement documents, as well as training food producers to participate in procurement.

In the pre-purchase phase, when it is already clear when and under what conditions public food procurement will be carried out, market research is needed to understand the possibilities to purchase the necessary goods, need to determine their possible contractual price and consequently choose the appropriate procurement method and procedure. This stage of the process is significant and will affect all future procurement and contract activities. If this part of the procurement procedure is done correctly, then the other stages of the procedure will be easier. Depending on the size and complexity of the contract, this stage of the process may take months till the deadline for publication of the contract notice. A good planning should minimize the risk of contract changes or variations. The biggest (and potentially most expensive) and more frequent made mistakes in contracts are due to inadequate planning (Public procurement, 2015). Before determining what to buy, what are estimating costs, and before developing selection and evaluation criteria in the procurement procedure, it is often useful for procurers to understand the market. Market research can provide information on the availability of products or services that meet the procurer's requirements, making it possible to determine the most appropriate procurement approach. Consultations with market participants before the beginning of the procurement process can help to identify innovative solutions or new products or services that the public authority may not be aware of. However, it should be ensured that the principles of transparency and equal treatment are respected in the consultation process with market participants and that disclosure of confidential information and / or preferential market signals should be avoided (Public procurement, 2015). If the municipality wants to include GPP criteria in the procurement, especially with regard to determining the distance or delivery time, it is important to make sure that there are food producers in the local area who can meet these requirements. Similarly, in identifying local producers and their opportunities, it is possible to

divide public procurement of food into parts, taking into account the availability and seasonality of food products. The estimated contract price is set before the beginning of the procurement procedure, while the exact determination of the contract price depends on the correct definition of needs. The planned procurement contract price is determined taking into account customer needs (defining what, in what quantity, with what qualities good are necessary), the amount of financial resources available to the procurer, market supply, if the planned deliveries are for one aim; if the goods and services in procurement are similar and they will be purchased in the same period of time. Establishing a realistic budget for the contract to achieve the desired results, and then providing funding for contract financing is another key activity. It should be based on the clear scope of the requirements and updated market price information. Depending on the nature of the contract, an appropriate amount of unexpected expenditure should be provided. Budget and unexpected expenditures need to be reviewed at all key stages throughout the life cycle of the contract. At this point, life cycle costs can be taken into account as a method for evaluating the required budget. (Public procurement, 2015). With regard to the application of the procurement procedure, it is necessary to evaluate the information obtained previously and to choose the right type of procurement based on the requirements of the regulatory enactments. Although this seems to be one of the easiest steps in procurement planning, the European Audit Commission has acknowledged (European Court of Auditors, 2015) that in the pre-procurement phase most of the revealed errors - 71 (82%) out of 87 - were serious errors. The contracting authorities were completely excluded from the procurement procedures by awarding the contract directly, although it was necessary to use the procurement procedure, or split the contract into smaller purchases, thus avoiding exceeding the threshold or using an inappropriate procedure.

## **2.2. Procurement procedure**

The Procurement Regulation is an act on which the subsequent procurement procedure is based and which, along with the regulatory framework (and at the same time appropriately to it) regulates the conduct of the procurement procedure. The rules contained therein, including selection and evaluation criteria, is binding until the conclusion of the contract is reached or an uncontested award decision has been reached. The regulations should include a description of the subject matter of the procurement. It must be clear enough. Unclear procurement regulations may have a significant impact on the award decision.

The technical specifications essentially include the procurers requirements for the service or delivery of the goods - from the requirements of the volume and quality of the food to the rules on environmental protection and the elimination of climate change. In accordance with the first paragraph of Article 20 of the Public Procurement Law, technical specifications must ensure equal opportunities for all tenderers and must not create unjustified restrictions on competition.

The most common problems with the preparation of technical specifications are:

- 1) Lack of qualified procurement specialists;
- 2) Problems in determining the exact list of required goods / services in purchases such as office supplies, food, etc .;
- 3) The need to develop requirements for non-standard purchases;
- 4) Parametres of procurement subject are not fully identifiable or they are too general;
- 5) Lack of sectoral experts – existing experts are not ready to engage in the development of technical specifications;
- 6) There are many innovative products on the market for which the procurer has lack of information.

The preparing of a weak specification is often the main reason for further amendments to the contract because it did not reflect the true size of the proposed contract. In order to address these issues, more time should be left for the preparation of procurement documents, and

municipalities could choose to procure goods and services centralized way, especially for catering services and food products for educational institutions. The evaluation of submitted tenders is a crucial part of the procurement process, and for this reason care must be taken to ensure that the correct result is obtained and that it is decided in a fair and transparent manner. The new Public Procurement Law defines the criterion of the most economically advantageous tender as the main criterion for evaluating bids. The contracting authority determines it, taking into account the cost or price, the cost and quality criteria, or the price only. The Public Procurement Law states that the contracting authority is still entitled to use the price only as a benchmark for the comparison and evaluation of offers, in cases if the technical specifications are detailed and other criteria are not relevant to the selection of the offer. This does not apply to "small procurements", where the estimated procurement contract price is Euro 10 000 - Euro 41 999.99. In these types of procurement the procurer is still eligible for the lowest price criterion, and this procurement category includes a large part of public procurement by public authorities, in particular where procurement is carried out in decentralized way. During the procurement planning phase, the procurer decides which evaluation method to be followed and it should be clear throughout the procurement documentation. When choosing the lowest bid, this is the most obvious case, and as a result, it is difficult for tenderers to oppose this decision. However, quality in such a case shall be taken into account only for the minimum quality requirements specified in the technical specifications (Public procurement, 2015). The most economically advantageous is increasingly becoming the most popular method of valuation and contracting authorities are becoming more and more proficient in its application. The most economically advantageous tender is determined using the cost-effectiveness method (for example, by estimating life-cycle costs), or taking into account the cost-effectiveness together with the quality criteria associated with the subject of the procurement contract. The customer evaluates which of the selected offers is economically most advantageous using determined evaluation criteria. Valuation criteria reflect the customer's priorities regarding to the characteristics of the procurement subject, i.e., provide the best value-for-money ratio. Members of the Procurement Commission should be able to carry out an assessment based on price and quality, technical value and functional characteristics; and the tenderers must also understand how to prepare the offer on this basis. On the basis of the most economically advantageous criterion, it is possible to include criteria relating to environmental and / or social issues as well as operating costs. The principle of economic advantage undoubtedly requires a higher qualification of procurer. The best solution would be procurements which are carried out in centralised way. However, looking for the lowest price, quality is often bad. Procurement organizers often complain about this. The most economically advantageous option gives the opportunity to pay more attention to quality assurance. The most economically advantageous offer contributes to the use of GPP criteria in public food procurement, thus promoting increase of local produce share in procurement of food and catering services made by local authorities. EU regulations regarding to public procurement are often mentioned as an obstacle to school food reform. The US procurement rules are also interpreted as a barrier for the purchasing of local products in school lunches because they, as well as EU legislation requires that tenders are not allowed to give priority to regional producers. However, compared to Great Britain and France approach to procurements, both of which comply with the rules laid down in the EU, it is clear that this problem is only interpretation. EU procurement laws and regulations are not barriers to implementation of sustainable procurement, unless the national and local authorities have the competence and confidence to do it under these rules (Morgan and Sonnino, 2007; Garnett, 2007).

Frequent mistakes in the most economically advantageous tender process are following:

- The Procurement Regulations do not provide an explanation as to how the criteria will be assessed (eg, the degree of detail of the delivery schedule, compliance with the requirements of the technical specification, warranty period and conditions, etc.);
- It is planned to evaluate (to allocate certain points) for bids that do not comply with the requirements of the regulation (below the required level);
- Violations in the evaluation process - violations of the principles of equal and fair treatment; the evaluations are not justified, the Procurement Commission departs from the given algorithm, and evaluates tenders according to other criteria as indicated in the procurement documentation.

As mentioned above, the procurement planning and execution phase can be improved by centralizing purchases. Benefits of centralized procurement:

- improvement of competence. If permanent procurement commissions are established, their members are knowledgeable in procurement matters and allow less error; so there is less chance of complaints;
- a better price. Centralization always increases the volume of goods to be purchased, and hence the unit price falls;
- More profitable contract conditions: when procurement is centralized and there are several bidders, they can talk about better contract conditions. The deadlines for order fulfillment are more favorable than in decentralized procurement;
- It is possible to ensure equal quality standards, thus ensuring the highest possible quality of the goods to be purchased;
- reduce of administrative costs. Generating a lot of procurement commissions is rather expensive: there are a lot of consumed working hours;
- As a result of centralization, the purchasing power increases - in the large-scale procurement, the contracting authority determines what is needed for it, while suppliers can adapt to this demand and navigate to it. It is an opportunity to influence the market to the customer in the desired direction.

### **2.3. Contract management**

The purpose of this phase of the process is to ensure that the contract is satisfactorily fulfilled in accordance with the outcome of the procurement process. With good planning, comprehensive, precise specifications and a well-designed contract, the need for any modifications to the contract during the execution phase should be minimal. Possible problems during the execution of the contracts are as follows:

- Certain contractors are trying to abide contract enforcement rules that address the respect of green principles, fixed prices, product quality, delivery rates, etc.;
- Procurers are lack of experience in administering contract performance, in dealing with problem situations in cooperation with suppliers;
- Fixed price mechanism for a specific time period is embarrassing for suppliers.

As a possible corruption risk, in the process of execution of contracts, it is possible to identify a provision in the Public Procurement Law which stipulates that, without a separate procurement procedure, amendments to a procurement contract already permissible are acceptable, if the monetary value of such amendments does not exceed 10% of the amount of the original procurement contract in case of delivery and service contract. This means that such regulation actually gives the right to the contracting authority and the chosen supplier to freely agree on the increase of the contract amount by 10% the day after the conclusion of the

procurement contract. Moreover, if one of the tenderers were informed of the willingness of the contracting authority after the conclusion of the contract to make such amendments to the contract, it would enable the tenderer to offer 10% lower price in the tender, which unequivocally poses significant risks to the free competition of suppliers (Logins, 2015).

After completing the contract, it is important to hold a review meeting to assess the performance of the contract compared to the original expectations. An important consideration to take into account when entering into a contract is the statement of success and recognition of those who are involved in the success and experience of the problems encountered in addition to the revealed risks. (Public procurement, 2015).

### **3. BARRIERS FOR PARTICIPATION IN PROCUREMENT FOR POTENTIAL LOCAL FOOD SUPPLIERS**

Often the skills to prepare an offer and win a tender for a large part of entrepreneurs is a very important prerequisite for growth or even the only opportunity to develop. LRATC has summed up the problems and obstacles (Rural Advisory ..., 2014) that are encountered by farmers in terms of food supply to local government authorities through public procurement. The main obstacles that make it difficult for local small-scale producers to participate in local government procurement are following:

- small producers are not competitive to participate in the public procurement of food, where the lowest price is still the main criterion rather than the most economically advantageous tender because local producers cannot compete with wholesalers;
- Purchases basically are announced in the summer, when the harvest is already growing and the owners have already found purchasers for it;
- small producers do not have sufficient and high-quality space for vegetable storage until the next harvesting season;
- Complications are often in intended product range in procurement parts and delivery terms. It is being dealt with by dividing the lots in such a way that products that can be grown in Latvia and supplied by local farmers are separated from exotic fruits.
- It would be easier for suppliers to offer their products through the cooperation. However, is difficult for the small farm owners to find leaders who would take the lead, and they must also deal with a relatively large distances to be taken by the providing the product supply.

Exploring other EU countries' experiences (Rosenberg et.al., 2014, Pinard et.al., 2013; Conner et al., 2012, Scottish Government, 2009), it can be concluded that there also has similar barriers to successful implementation of GPP. In addition, other countries have been identified other encumbrances of local entrepreneurs to participate in public food procurement:

- The price paid by the institutions is low;
- The quantity of products required by the body is inadequate for manufacturer (too big or too small);
- Expensive insurance premiums for the tender;
- Smaller companies have uncertainties with regard to access to procurement and tendering process by itself can be a burden;
- Lack of knowledge on how to sell their products to schools and other local authorities.

### **4. CONSLUSION**

Public procurement is a complex and complicated system with lots of stakeholders and complicated documentation. The European Court of Auditors concluded, that there is a certain degree of complexity for any public procurement system. However, the complexity of the current legal and administrative framework is considered a problem. Representatives of Member States indicated that the main causes of the errors are the large volume of legislation

and / or guidelines, the difficulty of their practical application and the lack of knowledge of how the public procurement procedure is carried out. Each procurement process consists of several stages, from procurement planning to execution of the contract, and at each stage the procurers face a variety of problems. One of the problems that goes through all stages of the procurement process is the lack of competence of the customer representatives and procurement committee members in the various issues related to the procurement process and the procurement subject. One of the solutions to this problem is to maximize the centralization of procurements, which allows both a better increase in the level of knowledge of the parties involved and a reduction of administrative costs and the costs associated with the purchase of the goods. There is a positive trend that more emphasis in procurement has recently been placed on the criterion of the most economically advantageous tender rather than on the basis of the lowest bid. This requirement for most economically advantageous tender is also included in the new Public Procurement Law, which also promotes the inclusion of GPP criteria in public food procurement. Also, the lowest price criterion on the part of local food producers is one of the main obstacles to participation in local government food procurements, as they are not able to compete with wholesalers.

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## FINANCIAL AND MARKETING PERSPECTIVES OF A CROWDFUNDING

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### ABSTRACT

*From a few initiatives mainly based on donations, the crowdfunding (CF) developed to a widespread alternative source of financing of the creative and innovative ventures but from the conventional financial markets mainly rated as highly risky. The entrepreneurs and associations started to use this model as a significant financing, marketing and even consumer-relationship management tool. As well, it is a model that indirectly fosters economic growth through financing innovative and creative projects, often in cultural and creative industry's sector that, through numerous researches, already proved its economic significance. In the same time, the nascence and development of the crowdfunding raised numerous questions in the fields of legal regulation and modelling of this alternative financing source, project and product branding, consumer-relationship management, financial structuring, intellectual property protection, appropriate marketing mix structuring, risk management etc. In this constellation, it is interesting to observe and research the implications of the crowdfunding development as a model of financing different ventures and projects with different aims run by profit or non-profit sector, as well as observing the final solutions of the problems that crowdfunding found throughout its development stages. Although is well known as a financing model and with existing national crowdfunding platforms, the Croatian crowdfunding ventures are rare and mainly launched on the global platforms, where the national platforms did not succeed to impose themselves as an equally valuable alternative. This article presents the results of the research of the position of the crowdfunding in Croatia, where its appearance should influence on the corrections of venture financing market imperfections and at the same time offer the possibility to use global platforms to boost new services, products and ideas.*

**Keywords:** *crowdfunding, equity crowdfunding, financing, marketing in the crowdfunding*

### 1. INTRODUCTION

The basic idea of the crowdfunding (CF) is setting up an internet platform on which different projects and ventures can be funded by numerous investors interested to support the project as of different reasons (empathy and emotional in donation based CF, purely financial in equity based and lending based CF, interest in the product or a service in reward based, or else). In CF, it is all about connecting, interacting, collecting, requesting, raising, sharing and following and that it can be defined as “as a collective effort of many individuals who network and pool their resources to support efforts initiated by other people or organizations. This is usually done via or with the help of the Internet. Individual projects and businesses are financed with small contributions from a large number of individuals, allowing innovators, entrepreneurs and business owners to utilize their social networks to raise capital” (De Buysere et al., 2012; referenced by Correia de Freitas, Amado, 2013, p. 95) or “as a process in which entrepreneurs acquire (small) amounts of money from many individuals who are interacting in online consumer communities on a specific web-based platform, in exchange for some type of reward” (Scholz, 2015; referenced by Strähle, Lang, 2017, p. 225). In short, “the essence of

crowdfunding is that social capital is converted to financial capital.” (Green, 2014, p. 87) Although CF focuses on the financial support of a group of individuals or crowd, the concept is strongly related to the social networking where users actively join and participate in online communities and share information, opinions and suggestions about the new initiative, brand or project (Ordanini et al., 2011; referenced by Strähle, Lang, 2017, p. 225). As long as one group has ideas (to develop a new project, service or a product or conduct the project) and the other group is willing to help to realize those ideas, CF will continue to persist irrespective of the existence of other financing models, independently to its current form. According to Valančiene and Jegelevičiute (2014, p. 206) “mobilizing people and generating ideas is one of the main points crowdfunding is ahead on in comparison to other financing options.” The main aim of this work is to present the results of the analysis of the CF position in Croatia, where its appearance should influence on the corrections of venture financing market imperfections and at the same time offer the possibility to startups to use global platforms to boost new services, products and ideas. The next chapters are giving overview of the CF historical development, the presentation of the CF significance from the financing and marketing aspect and the analysis of its position in Croatia.

## 2. DEVELOPMENT OF A CROWDFUNDING

Although even today considered as an alternative financing, the crowdfunding (CF) can be found far back in a history. One of the oldest examples is funding the Alexander Pope’s translation of Iliad in 1713 that was entirely financed by 750 individuals who subscribed the payment of 2 gold guineas each. As well, the well-known CF was led when Mozart, in 1783, asked the pledge for the organization of three piano concerts where the investors are even today remembered by the record of the projects’ official manuscript. (Cetti, Corso, 2014, p. 46) As well, there is an example of funding campaign in 1885 conducted for financing the construction of Joseph Pulitzer’s granite pedestal for the Statue of Liberty. (Freedman, Nutting, 2015, p. 2) Although back then, the expression *crowdfunding* did not exist, and it was used in a different technological environment, it was a successful way of raising money. Even today, creators, innovators, associations, companies raise money to carry out their idea into act where the technology development made the funding process much faster and, to some point contributed to transparency. “It is a new, high-tech version of a centuries-old practice.” (Freedman, Nutting, 2015, p. 1) One of the examples of raising money in the beginning of Internet era, was in 1997, when a British rock band called *Marillion*, raised \$60,000 through its website to help finance their North American tour (Cohen, 2016; Masters, 2013; referenced by Strähle, Lang, 2017, p. 223). With the use of their website, *Marillion* showed the successful reach to numerous backers (the crowd) via the Internet and set the cornerstone of today’s CF. This shows that the “Crowdfunding is not really new, just the name is.” (Green, 2014, p. 87) Due to this success, the first specialized CF platform *Artist Share* was launched in 2001, followed by today most significant platforms, *IndieGoGo* (launched in 2008) and *Kickstarter* (launched in 2009<sup>1</sup>) that shaped CF into what it is today. (Bradley and Luong, 2014; Cohen, 2016; Friesz, 2015; referenced by Strähle, Lang, 2017, p. 224) Since then CF has grown significantly with an estimated global fundraising volume in 2015 of \$34 billion according to Massolution’s 2015 crowdfunding report (Massolution, 2015; Zeoli, 2015; referenced by Strähle, Lang, 2017, p. 224). According to Gerber et al. (2012, n.p.) “Crowdfunding platforms, such as RocketHub, Kickstarter, and IndieGoGo provide opportunities for anyone with internet access to pitch an idea to their social network and beyond and to gather funding to realize their work. Ideas span across fields and vary in scope, from a jazz musician seeking funds to embark on a tour, to an academic looking for money to write and self-publish a book, to a product designer with an

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<sup>1</sup> Kickstarter already in 2011 had more than \$7,000,000 pledged per month. (Kickstarter, n.d.) In the end of 2013 the platform had 123,467 projects and combined funding of over \$902 million. (Barbi and Bigelli, 2017, p. 1)

idea for an iPod holder.” It is also interesting to mention those big companies like General Electrics, Sony, Honda, Warner Bros etc. and big names in the music industry like R’n’ B group TLC used (sometimes more or less successful) CF to market their products. (Econsultancy.com Limited, 2017) Today, there is a larger awareness of the power of crowd synergy that is as well, shown in the Chart 1.

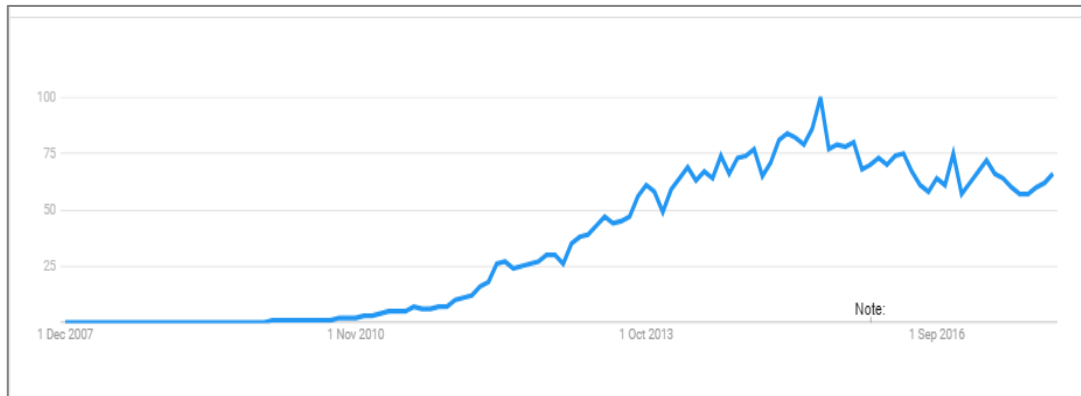


Chart 1: The changes in interest in the topic on crowdfunding (Google search interest) (Google Trends, 2017)

The Chart 1 shows a trend of the Google search of the term “Crowdfunding” in the last 10 years where the value of 100 shows the highest level of interest. By Chart 1, the interest in the term “crowdfunding” was almost non-existing before 2010. From a global comparison perspective, the Statistics Portal is bringing the highest CF transaction values in 2017 were top values were reached in China (US\$5,505.1m) significantly leaving behind U.S.A (US\$ 958,9m), UK (US\$138.2m), France (US\$87.8m) and Japan (US\$80.6m). (Statista GmbH, 2017)

### 3. EQUITY RAISING CROFUNDING AS A MODEL OF CLOSING STARTUP FUNDING GAP

Over the years the four main types of CF were developed: the donation-based, the reward-based, the lending CF and the equity CF (ECF). This chapter is analyzing ECF, as the authors found it most interesting from the aspect of the financial management theory and innovative contribution to the financial practice. “The innovative aspects of equity crowdfunding lie in the interaction of the financial sphere with the social one.” (Nasrabadi 2016, 207) As well, the ECF is been considered innovative as it is using innovation to fill the startup funding gap that occurs as the result of the perception of the startup and creative industries projects as a high-risk, insufficiently collateralized and therefore unattractive to traditional creditors. (Nasrabadi 2016, 207) As opposite to other types of CF, non-financial motives have no significant importance in the ECF investing (Cholakova and Clarysse 2015; referenced by Block et al., 2017, n.p.), so ECF can be considered mainly profit driven. Therefore, ECF can be observed from the perspective of the entrepreneur (issuer, venture, startup) and investor. From the investor’s point of view, the basic question in decision-making process comes from the point of relation between the project risk and the expected profit from the investment as well as the investors’ attitude towards risk. Considering above mentioned, it is not surprising that in the last years ECF volumes raised partially as the result of market interest rates and rates of return on government and corporate bonds decrease, which made them less attractive to investors. In this constellation, the investors started to seek more profitable investment opportunities such as venture capital funds, incubators or crowdfunding providers that gave better perspectives to the innovative and more profitable, although riskier projects and ventures (Block et al., 2017, n.p.).

In every investment opportunity the main question is how to determine and evaluate the level of the investment risk, especially since the information about the previous investors businesses in CF are mainly scarce or unavailable (as the CF is frequently used by startups). Moreover, “unlike traditional investors, crowdfunders often participate in a marketplace without any awareness of the potential risks associated with their participation”. (Kim et al., 2017, 26) In the CF campaigns, there are three main players with several links between them: CF platforms (that can have the role of the brokers-dealers), the backers (investors) and businesses (entrepreneurs, issuers) where CF platforms have a role of intermediary between the last two actors. By the Valančiene and Jegelevičiute (2014, p. 206) the CF platforms are of high importance as of their role in setting up of the ECF processes, defining the minimum level of information provided by the issuers for the investors, transparency and safeguards set to minimize the ECF risks as well controlling the ways the ECF process is being carried out. Giudici et al. (2017) believe that the CF has mainly social and emotional level and as to its concept of relying on a crowd good judgment and the belief of future profits. The investors will decide to fund the project if “the amount of money to be invested is low enough to consider negligible any subsequent loss, the project has a strong emotional content, and returns create an exclusive non-monetary benefit, that may be shared only among the financiers, enhancing the social and emotional nature of the deal.” (Giudici et al., 2012, p. 12) Nikolaos and Wei (2017) carried out the research of the most important motivations and risks of CF in Germany, Poland and Spain. Their results showed that the young, highly educated male is the average representative of CF investor where the “interest and excitement” is the category that mainly drives this population to invest. As well, they found out that the “poor information” and poor returns are the main risks although significantly more important for p2p lending than ECF. As well, the risks of a fraudulent borrower significantly affect the crowdinvestors in Germany, where in the Poland the risk from the fraudulent platform is included as well. (Nikolaos and Wei 2017) In general, the “risks faced by ECF investors include: the risk of capital loss, the risk of platform closure, the risk of fraud, the risk of dilution of shareholder value in successive financing rounds, the risk of non-declaration of dividends, the risk of no voting and monitoring rights, and the illiquidity risk”, that includes the risks that can be caused by the platforms as of inadequate operating or the absence of regulations on ECF. (Lin, 2017, 6) Aforementioned, can be main obstacles of considering the ECF as model of closing the existing startup funding gap. When researching the success factors of CF campaigns, the Hornuf and Neuenkirch (2017, 795-811) said that besides information cascades, portal design and the specific features of how an ECF campaign is run, *herding* also influences investors’ willingness to startup investments. The CF investors tend to make the investment decision without conducting much due diligence with the assumption that others might have done that (Freedman and Nutting, 2015, p. 114) where this phenomenon can be rational (almost at the level of a business strategy) or irrational where the decision of a crowd could be unsuccessful or wrong. (Hornuf and Neuenkirch, 2017, 795-811) At the same time, there are cases of goal-gradient behavior or a *herding* with the raise of backers interest in investment even after the project reached its goal. This can lead to business overloading and possible delays in fulfillment of its obligations that is specially emphasized at the reward-based CF. (Kuppuswamy and Bayus, 2013, p. 1-37; Mollick, 2014, p. 1-16) As well, there is an open risk of too fast acceleration of the startups that are not organizationally ready for the rapid growing, so instead of having the steady, adequate growth rate end as of balloon effect. Ahlers and associates proved that in ECF investors are paying a lot of attention to the projects financial and governance information. Therefore, projects that provide more concrete and quality information for the investors are more successful in the time efficiency and the level of capital raising. The authors argue that the CF market operates in a rational manner, although there are investors with different level of expertise and with diverse motivations (Ahlers et al., 2015, 29; Kim et al., 2017, 26)

The types of crowdfunding (donation-based, reward-based, lending, and equity) are eventually defining the essential complexity of the legal framework and importance of information asymmetry between CF actors. (Ahlers et al., 2015, p. 6) There is still an open question of defining the adequate legal framework on the EU level and the level of its states, but on the other markets as well (i.e. China that was analyzed by Lin, 2017) that will adequately resolve the ECF's open issues and allow it to reach its potential is still open. (Giudici et al., 2012, p. 13; Lin 2017, p. 38) As ECF is the developing industry, the further research should be conducted in the area of legal as well as economic framework in order to support the CF actors to "build more certainty for equity-based crowdfunding" (Hagedorn and Pinkwart 2016, p. 83). The Li (2017) argues that currently, legislative system is not strong enough to protect the investors. He states that as the CF platform businesses are based on profitability, it cannot be expected that the platforms will develop stringent auditing policy without the strict state regulation system but will tend to relax the audit of the ECF projects. This leads to the higher information asymmetry that caused the collapse or closing of the crowdfunding few platforms in China (Li 2017) but in U.S.A. too (the example of closing the ProFounder 2012 by Techli n.d.). Therefore he argues that in the current situation the "interests of a large number of investors cannot be guaranteed" (Li, 2017, 282) so the regulator should take the more significant role in the market supervision and keeping track with the challenges of the constantly developing financial technology. (Li, 2017, 282; Bago and Pilipović, 2016, 34; Ajay, Christian and Avi, 2013, 93) In the U.S.A., the ECF was regulated by JOBS Act in 2012, where ECF offerings became similar to small-scale IPO's in the way that issuers have to have their offering documents and disclosures approved by the SEC and can raise the capital from anyone (accredited or non-accredited investors). At the other hand, there are arguments against strong and strict regulation where the strong regulation could mean the increased administration, lengthening the CF processes and therefore diminishing of the importance of the CF as the model of easy access to capital and investment opportunities (Blace and Grubisic, 2017, p. 27-28; Bago and Pilipović, 2016, 34). "For now, the European Commission declaratively supports and promotes crowdfunding, but hasn't announced the intention to more closely regulate it." (Blace and Grubisic, 2017, p. 446). As to the still open questions of the ECF information asymmetry inadequate legal framework, exclusively profit-oriented ECF platforms, the underdeveloped models of investors protection, ECF market participants (founders and investors) with a different level of financial sophistication and diverse investment motivations, it is questionable if the ECF will ever reach the level to close the existing gap between startup funding demand and available supply. In addition, the CF is probably not a model that will in the future substitute other financing concepts, including the venture capital industry but those financing models will continue to coexist. (Manchanda and Muralidharan, 2014, p. 372)

#### **4. CROWDFUNDING AS A MARKETING MODEL**

The interest of the academic community for this CF topic significantly grew from 2007 after the publishing of the work of Michael Harms. So far, the relationships between CF and donation theories have been put forward. However, there are not much research looking at the relationships between CF and marketing. The marketing is directly related to the business's success as it includes the role of advertising, public relations, research and development, promotions and sales. In a CF, the successful marketing strategy attracts potential funders by introducing and promoting the project effectively. (Choi, 2015, p. 11) CF requires a crowd to yield a successful project but at the other hand can be used to promote the innovative and creative product or a service. Therefore, individuals or organizations are using CF platforms not only for financial but also for marketing purpose.

According to Moissejev (2013; referenced by Brown, Boon and Pitt, 2016, p. 3) for small firms, CF can be considered a marketing tool and that it can be used in three following ways:

1. "A project can be used as a research tool to assess the quality of creative ideas. By tracking the number of backers and the feedback from social media, organizations can compare their product ideas with those of competitors.
2. CF can be used to promote a new product, not only reaching people who back the project but also the entire CF community.
3. CF can be used as a direct sales channel by rewarding backers with the first samples or versions of offerings and ensuring a readily available sales pipeline."

The above mentioned ways of CF as a marketing tool are mutually interactive, can be inexpensive and excellent way to promote the idea or a new or modernized product or service. The people who decide to use CF as a marketing model, have to thoughtfully use social media as it very important to communicate in the way that is acceptable for the users that mutually share the social media. In this communication process, it has to be clear who is the crowd to which the project is going to be presented. The crowd or the social media users, have to understand the fundamental idea of the new project (regardless of the type of industry: from music to science) that wants to be promoted through the CF. In this part, keeping track with latest digital marketing achievements is almost essential for providing and eventually launching a successful CF campaign. Sayedi and Baghaie (2017, p. 35) analyzed the effects of CF as a marketing tool on producers' (ventures, enterprises) that are using the CF platforms for promotion of that idea) profits where they concluded next:

1. "Producers can use the CF to estimate market demand and create a pre-order channel for their new product.
2. Marketing advantage of using CF for producers is that it gives them the ability to price discriminate. Producers can force the high-value consumers to pay more for a product by strategically setting their CF campaign goal and pre-order price. To ensure production, rational consumers who have high valuation for the product will contribute to the CF campaign and pre-order the product even if they know the product will eventually become available in the market at a lower price. This also provides a rational explanation for consumers' "reward less" contributions to CF campaigns such as their efforts in advertising the campaign by soliciting additional contributions from their social networks.
3. If producers can commit to product quality in their CF campaign, the use of CF increases their profits as well as the product quality."

The authors concluded that CF is a good model for promotion and customer relation development, but to ensure wanted financial results it needs earlier quality proof of a product. (Sayedi and Baghaie 2017, p. 36) As well, CF platforms are great marketing model as it, through platform forums, allows using the promotion form of "word of mouth", as cited: "Kickstarter is about more than just money. A Kickstarter project is a great way to connect with your audience and spread the word about your work". (Gerber, et al., 2012, p. 5)

## **5. CROWDFUNDING IN CROATIA**

Jakovljević (2015) studied the motives of Croatian consumers to participate in CF campaigns (with 223 respondents of which 131 women and 99 man) and found that 15 % of respondents had personal experience with CF (most of them used Indiegogo and Kickstarter platforms) from which the motivation of 58.7% is pure fun. 80.4 % respondents consider the CF an innovative model and 33% care what other people think about the campaign. 60% of respondents had a personal benefit and 68.7% would share the information of their backing of the campaign on social networks and news. 55.3% claim that receiving financial benefit is not crucial for backing

the campaign, 70% believe that there is a larger chance for backing the campaign if they personally know the investor and that the trust in the founder affects the decision of the backing. 90.4% of the respondents would fund a campaign that benefits the local communities. In domestic crowdfunding campaigns in Croatia, approximately EUR 0.3 million, was raised in 2016, or EUR 1.73 million in total from the starting of the first campaign. Compared to last year's amount of 0.7 million EUR, this is more than half of the number from the previous year, in terms of amount and number of successful projects. In year 2016, 49 projects were launched mainly on the Indiegogo platform, of which only 12 collected the required amount, as opposed to 23 successful projects in 2015. Campaign promoters mainly focused on socially useful projects, and there was only a small number of projects from the field of creative and productive activity. The average successful campaign had 423 supporters, where there were 6163 backers in total for all successful campaigns in 2016. (Hafner 2017) The most important platforms in Croatia are Indiegogo (47 projects launched in 2015 and 44 in 2016), Kickstarter (3 projects launched in 2016), GoFundMe, Rising Track and Pledge Music. Today they are three national CF platforms: Croinvest (combining donations, awards, loans, ownership participation and profit participation CF customized to domestic law.), Croenergy (donation based CF platform exclusively for sustainable energy and environmental protection projects) and Doniralica (oriented on charity projects). In 2016 the new Founderbeam SEE ECF platform was announced as a joint venture between Founderbeam (Estonia), Zagreb Stock Exchange (Croatia with 20% of ownership) and HUB385 (biggest coworking platform in Croatia). On new Founderbeam SEE platform, the investors will be able to trade with the startup company equity-shares immediately after the initial investment phase, as if they are listed on the stock market, with using the innovative bitcoin-based system. The innovation is and in the fact that the startups will have an access to the Founderbeam's logistical support and presentation of business concept in all stages of financing. (Zagreb stock exchange 2016) Fees of the Croatian CF platforms are mainly lower than in developed countries (ie. Croinvest free of charge; Funderbeam 1 % if the campaign is successful) nevertheless, they never succeeded to raise more significant interest but almost all larger campaigns were launched through foreign CF platforms regardless of the CF type. According to the results of the research conducted by the agency Brodoto in the SEE region for the period 2012-2016 there was a significant raise of the CF funding of 450% where only 10% campaigns succeeded in CF and less than 0,5% of the SEE total population contributed (approx. 120 th. of backers). As well, it was found that 88% of the campaigns were launched through Indiegogo with average 10% of success rate. In the same period the 61% of total funds were raised through the Kickstarter with success rate of 38 %. (Gregović 2017) Table 1 shows the distribution of the funds raised through CF in the SEE region by countries.

	<b>in '000 USD</b>	<b>Share</b>
Croatia	1.044	12%
Slovenia	7.049	78%
Serbia	400	4%
Bosnia and Hercegovina	256	3%
Macedonia	205	2%
Montenegro	40	0%
<b>Total - CF funding in SEE region</b>	<b>8.994</b>	<b>100%</b>

Table 1: Funds raised through crowdfunding (authors according to Gregović, 2017)

According to Hafner (2017, p. 14) in Croatia they are too much bureaucratization of procedures and regulations, which makes it difficult to finance CF projects. While in America the procedures that regulate CF are more adopted to this model of financing, in the most European countries, including Croatia, it is not the case. The CF platform is a legal entity that ultimately

transfers funds raised to project owners, where in Croatia a business entity cannot fund the individual without having a contract or agreement for some kind of service (i.e. labor, work or copyright contract etc.). Likewise, the funds raised in the campaign are being taxed at rather high tax rate (to 40%), which actually benefits the state almost as much as the promoter of the CF campaign. By the Alternative Finance Maturity Index that analyses the development of the CF environment in 27 countries the Croatia is placed on 17<sup>th</sup> place between Poland and Denmark with best-developed area of diversity of the platforms, the level of activity as well as developed regulation in donation and reward based CF. The weak points are the volumes reached, cross border activity and access to finance of the SME's. (CrowdfundingHub, 2015) Public authorities cannot use the CF (specially lending model) neither for any type of projects – as the official standpoint of the Ministry of finance, is that they cannot fund from the individuals. Equity CF is possible in private companies in a form of transfer of ownership and voting rights but the procedure is hampered with the obligation of physical presence in the change of the ownership shares stated in the company's founding act except in the case of the listed shares on the stock exchange. A numerous activities have been led to change the, almost non-existing, crowdfunding regulation through the conferences, academy, blogs and research. For example, the Crowdfunding Academy, cofounded by the UNDP Croatia and social enterprise Brodoto, is organizing seminars, conferences and from the end of 2015, the Academy broaden its range of educational programs on alternative financing and on alternative currencies, forecast based financing, community bonds etc. Nevertheless, the CF in Croatia has not managed to reach the critical point with positive CF development environment, where ECF could be considered crucial for startup financial development. As well, as to the financial crises in Croatia that lasted almost 7 years, low interest rates on the loans in the last years and the reluctance of young professionals to take entrepreneurial risk, there are only rare cases of launching Croatian ECF campaigns, especially on the platforms operating in the Croatian market.

## 6. CONSLUSION

If startup do not have access to business angels, banks or venture capitalists CF is a good option to pitch, realize and finance an idea or venture, but with careful and strategic planning that requires a lot of time, energy and knowledge. This is specially emphasized in the case of ECF, as the model of startup risk evaluation is still far from perfection and the CF backers tend to invest without conducting deeper due diligence. As CF is a model that is still shaping and developing, it is unlikely that in the near future the CF will succeed to close the market gap in the startup funding and replace the other alternative funding models. Instead, CF will continue to coexist providing the added value through the CF campaigns – marketing and promotion, which other models are not able to provide. In the case of Croatia, the crowdfunding ventures are rare and mainly launched on the global platforms, where the national platforms did not succeed to impose themselves as an equally valuable alternative partly as of nonexistent specific CF legislative. Therefore is important that the state and the other market actors recognize the CF as a model that attracts and activates the capital of small investors and in the same time by its marketing campaign promotes innovative and creative products and services. As to the abovementioned, the future research should be focused on the defining the existing barriers of the CF development and the influence of the current legal regulations on the CF in the European Union and emerging countries.



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## ENTERPRISE RISK MANAGEMENT: A LITERATURE SURVEY

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### **ABSTRACT**

*In turbulent environment characterized by increased number and various types of external and internal risks, companies are recognizing the value of enterprise risk management implementation. What is specific for enterprise risk management is a holistic view versus traditional "silo-oriented" risk management. Enterprise risk management is strategically oriented and there is evidence that its adequate implementation may help companies increase their value. In this paper the author will present a literature review on enterprise risk management in non-financial companies, evidence on determinants of its adoption, findings of research available on the topic how enterprise risk management increases firm value and other important aspects of enterprise risk management adoption and implementation.*

**Keywords:** *enterprise risk management, holistic view, non-financial companies, value creation*

### **1. INTRODUCTION**

Nowadays, companies that are operating in turbulent, complex and dynamic environment are under extreme pressure to achieve positive business result and satisfy regulatory requirements that are imposed on them. Besides the pressure of competition among companies, there is also the pressure to achieve positive credit ratings. The recent financial crisis has only increased anxiety companies are faced with when contemplating on risks they are facing. According to Paape and Spekle (2012) during the financial crisis "weaknesses in risk management practices have become painfully visible and companies are currently under significant pressure to strengthen their risk management systems and to take appropriate actions to improve stakeholder value protection." The global financial crisis has only accentuated non-efficiency of existing risk management systems and the importance of an integrated approach to risk management within companies. Also it is of extreme importance to mention that the purpose of establishing enterprise risk management is not only to satisfy regulatory incentives or to implement something new into the company but to include the information that is received through this process in daily decision making in the company and in strategic-related decision making. Therefore, it is of extreme importance that the supervisory and management board are aware of matters related to enterprise risk management and that the implementation of the process has their full support and is adequately communicated throughout the company.

Having on mind the complexity of risks companies are facing and the significance of establishing and implementing adequate enterprise risk management system in the company, this paper aims to provide an overview and assessment of the available literature regarding the phenomenon of enterprise risk management. The paper is oriented primarily on the literature review related to non-financial companies due to the fact that financial companies are facing stricter regulatory incentive to introduce enterprise-wide risk management systems so it is of our interest to research incentives and drivers of enterprise risk management adoption among non-financial companies. Following the introductory notes is the section on the risky surrounding of contemporary organizations. Third section deals with theoretical foundations of enterprise risk management. Fourth section is oriented on determinants of ERM adoption, fifth on value creation via ERM systems and finally conclusions are brought.

## **2. THE RISKY SURROUNDING OF CONTEMPORARY ORGANIZATIONS**

As previously mentioned companies are facing many risks in their daily activities, arising both from internal and external sources. Generally, risky events are characterized by frequency of its occurrence (probability) and the extent of the consequences (magnitude) that the event generates (Verbano and Venturini, 2013). As for causes of risky events, they may be external (economic, environmental, social, political or technological) or internal (infrastructure, human resources, processes and technology used by the company) (COSO, 2004). Antikarov (2012) is dividing the strategic risks firms are exposed to as external and internal risks, risks of shock and risks of deterioration. According to Meulbroek (2002) "the goal of risk management is not to minimize the total risk faced by a firm per se, but to choose the optimal level of risk to maximize shareholder value." The implication of this statement is that risk, in its core, is not purely a negative event, it may also present a chance for progress. This is in line with Gatzert and Martin (2015) who have stated that the "ERM not only attempts to minimize risk but explicitly accounts for potential opportunities". This is a very noble goal but can hardly be achieved if the company is managing risks unsystematically. Therefore there have been several attempts to standardize the risk management processes within companies. One of most often used frameworks is COSO (2004) that has introduced the term enterprise risk management (ERM). The definition of enterprise risk management (ERM) according to COSO (2004) is the following: Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of the entity's objectives. Some other very important terms related to risk management in companies include risk appetite and risk tolerance. According to COSO (2004) "risk appetite is the amount of risk, on a broad level, an entity is willing to accept in pursuit of value". In other words, risk appetite may be regarded as an attitude company is taking towards risk on the level of whole organization (Paape and Spekle, 2012). COSO (2004) is also defining risk tolerance as "the acceptable level of variation relative to achievement of a specific objective". On the other hand, there are also some opponent opinions on the subject of standardizing risk management practices. According to Power (2009) the idea of organization-wide risk appetite and risk tolerance is over simplistic and may not be in line with the possibilities that companies are conducting. This critique on the standardization of ERM rules is further on supported by Paape and Spekle (2012) who provide evidence that the application of the standardized framework (in this research the influence of the COSO framework has been explored) does not help improve risk management quality and that the quantification of risk tolerance does not contribute to perceived risk management effectiveness.

## **3. ENTERPRISE RISK MANAGEMENT (ERM)**

ERM is different from traditional approaches to risk management due to the fact that it addresses all risks company is exposed to simultaneously unlike traditional approaches in which every risk is analyzed separately. The main characteristic of the ERM is integration in management of risks that are derived from various sources and that impose a threat or an opportunity for a company, i.e. risks are not treated in "silos" but rather holistically. Schiller and Prpich (2014) argue that ERM is a transformer of risks that are primarily seen by a company as something that it must be defended from into a future-oriented concept that is making it possible for companies to seek and seize opportunities that are available in their environment. The same authors further on state that ERM "stands separate from other organizational risk management systems as the only one that attempts to integrate strategic, financial, hazard and operational risk into a single framework to inform an organization's strategic objectives" (Schiller and Prpich, 2014).

According to COSO (2004) ERM is presented as a matrix in three dimensions and it consists of eight components that are all interrelated. These components include:

1. Internal environment that is generally related to organizations approach to risk management matters,
2. Objectives settings are related to the process in which the goals of the entity are defined and communicated throughout the organization,
3. Event identification that is oriented on identification of both internal and external sources of risk that, in case of occurrence, may have influence on organization's objectives,
4. Risk assessment is related to analysis and evaluation of potential risks by assessment of their frequency and impact,
5. Risk response is characterized by the identification of actions that are appropriate for handling a certain risk and aligned with company's goals and the defined risk appetite,
6. Control activities are encompassing policies and procedures that are ensuring the adequate execution of risk responses,
7. Information and communication are related to the mechanisms that are ensuring that information is adequately formulated and communicated throughout the organization,
8. Monitoring consists of all activities that are conducted by company's management and are directed at the evaluation and verification of the effectiveness of the whole process.

The characteristics of ERM include the following (Hardy, 2015, pp. 37):

- A wide range of risks are discussed and reviewed, including reputational, human, capital, strategic and operational;
- Aligns risk management process with strategy and mission;
- May include "upside risks" (opportunities);
- Helps manage growth, allocate capital and resources;
- Risks are owned by all and mitigated at the department level;
- Many risk mitigation and analytical tools available;
- Risk manager is the risk facilitator and leader.

Ward (2003) has developed a model of holistic risk management development that includes six dimensions: interpretation placed on term "risk", location of applications in the strategy life-cycle – the decisions to which risk management is applied, the purpose of risk management, the nature of risk management processes employed in degrees of formality, scope of the process, tools and techniques employed, issues that are quantitatively examined, the parties involved and allocation of responsibilities for risk management, resources applied to risk management. Main advantages of ERM include: greater probability of reaching firms' goals, reduction in the cost of capital (increase in the rating and confidence of investors), greater understanding of main risks and optimization of the portfolio of risks, reduction in the volatility of cash flows, definition of intervention priorities, improvement in compliance to norms, smaller number of unforeseen events and the consequential losses, greater push to change and greater response speed to varied business conditions and greater tendency to risk in order to have greater returns (Verbano and Venturini (2011) according to: Liebenberg and Hoyt (2003), Barton, Shenkir and Walker (2002), Cumming and Hirtle (2001), Lam (2001), Miccolis and Shah (2000)). Arena, Arnaboldi and Azzone (2011) are stressing out that on one hand there are advantages of ERM encompassing ERM as an insurer of sound corporate governance, but on the other there are some unsolved questions regarding ERM as to what ERM means to a certain company and its management and the usefulness of certain ERM program.

#### **4. DETERMINANTS OF ENTERPRISE RISK MANAGEMENT ADOPTION, IMPLEMENTATION AND QUALITY**

According to Hardy (2015, pp. 32) before enterprise risk management can evolve into practice, “the basic fundamentals of managing risk must be well understood and a part of the learning foundation. This usually starts with establishing a common understanding and definition of risk for the organization”. In continuation to definition of risk, companies must provide support for ERM design and implementation. It is therefore of our interest to provide evidence on available research conducted on the topic of possible drivers and inhibitors of ERM adoption among companies. Arena, Arnaboldi and Azzone (2011) have analyzed different ERM models available in the literature (Gates, 2006; Protiviti, 2005; COSO, 2004; Liebenberg and Hoyt, 2003; Lam, 2003; Kleffner, Lee and McGannon, 2003; Meulbroek, 2002, AIRMIC, 2002) and have found that there are two characteristics that are distinguishing traditional approaches to risk management and ERM and these are:

1. Comprehensiveness which means that ERM should cover different risk categories and is related to the range of risks that are considered,
2. Integration that is related to the fact that ERM systems should span all lines of business, functional areas and their reciprocal influence, i.e. governance of risks within all levels and functions of the company.

Miloš Sprčić, Kožul and Pecina (2017) and their research on sample of Croatian listed non-financial companies has indicated that ERM systems in these companies are fairly low and underdeveloped and that at the same time the main drivers for ERM development and higher level of implementation are the size of the company and managerial support that is reflected through corporate culture. Farrell and Gallagher (2015) found that the valuation premium regarding ERM is driven primarily by the risk culture and integration of ERM processes within the organization and by the degree in which ERM process is regarded as integral element in strategy and planning activities by the management board. Paape and Spekle (2012) have conducted a research on the extent of ERM implementation and the factors that are associated with cross-sectional differences in the level of ERM adoption and further on risk management design choices and their effect on perceived risk management effectiveness. The results of the research conducted on the sample of 825 companies from Netherlands (varying from small to large companies; both private and public sector) suggest that the extent in which a certain company has introduced ERM is influenced by the regulatory environment, internal factors, ownership structure, firm and industry-related characteristics.

Pagach and Warr (2011) have examined the factors that are drivers of ERM implementation on the sample of 138 firms. The proxy for ERM implementation is the existence of the function Chief Risk Officer (CRO). The results indicate that larger companies with more volatile cash flows and riskier stock returns are more likely to have implemented ERM. The authors have also found that the likelihood of ERM adoption is increasing in the risk taking incentives of the CEO. Kimbrough and Compton (2009) have conducted an empirical research on the connection between organizational culture and ERM implementation. The incentive for this has been found in previous research by Miccolis (2003) who found that organizational culture may be one of the top barriers to ERM implementation. The evidence provided in the research indicate a positive correlation between organizational culture and ERM programs that are established within companies. Although more and more companies are recognizing the fact that establishment and implementation of ERM is a necessary prerequisite for business process improvement, there are still many differences in the extent and quality of implemented ERM. According to Farrell and Gallagher (2015) and adapted from Marks (2011), Lindberg and

Seifert (2011) and RIMS (2006) there are several levels of maturity of risk management models in companies and these are:

1. Ad-hoc: extremely primitive level of ERM; risks are managed based on individual decisions and by improvising;
2. Initial: silo-based approach with little integration of risks and no unique definition of risks within different departments of the company;
3. Repeatable: existence of established and repeatable approaches to risk management;
4. Managed: risk management activities are spanned enterprise-wide, full standardization and communication of risk procedures within the company;
5. Leadership: risk information presents a basis for strategic decision-making and long-term planning; there is clear understanding of terms risk appetite and risk tolerance and their repercussions for the company.

Segal (2011, pp. 25) defines the criteria that companies have to match in order to achieve more mature ERM programs and these are:

- Enterprise wide scope,
- All risk categories are included,
- Key risk focus,
- Integrated across risk types,
- Aggregated metrics,
- Includes decision making,
- Balances risk and return management,
- Appropriate risk disclosure,
- Measures value impacts,
- Primary stakeholder focus.

Baxter et al (2013) have conducted a research on the topic which factors may be associated with high-quality ERM programs as measured by Standard and Poor's ratings. The results of the research are suggesting that "higher risk companies have lower ERM, likely due to resource constraints inhibiting the investment necessary for an effective ERM". The results of the research also indicate that more quality in ERM programs is related to better corporate governance, less audit-related risk, presence of risk officers or risk committees and boards with a longer tenure.

What is very important to mention in this section are the problems in empirical research of ERM. Namely, Gatzert and Martin (2015) accentuate that in research that is related to ERM one big obstacle is collection of data and that it presents a major challenge due to which ERM research is usually conducted on restricted geographical area or in certain industrial sectors. The authors have therefore made a review of available research on the topic of ERM and two major data sources are visible: survey and public data. It must be mentioned that "companies hardly publish any comprehensive information about their existing risk management systems or plans" (Gatzert and Martin, 2015). When scanning publicly available sources for data, usually financial reports or CEO letters are analyzed by looking for signals in the text that are indicating the presence of Chief Risk Officer (CRO) or similar function, but as indicated in some of the existing research (Grace et al, 2015) this assumption may be misleading. Baxter et al (2013) have noticed that the research on ERM is conducted by surveys or from publicly available company information, but generally are skeptical towards the usage of publicly available data due to the fact that it is hard to find an adequate proxy for corporate activities in publicly available information.



## 5. ENTERPRISE RISK MANAGEMENT AND VALUE CREATION

More authors have discussed the fact that one of the basic aims of ERM is to increase the company value. In order for that to be possible it is important for ERM to be in compliance with the strategy of the company. According to Antikarov (2012) strategy is developed through the process of identifying coherent strategic alternatives and selecting among them the one that is expected to maximize the shareholder value. The same author states that “the creation of shareholder value through risk management is an optimization activity where management assesses the probability of occurrence and likely impact of different risks and balances it against the cost and benefit of available mitigation...” and “the value creation goals of ERM are – through the ongoing optimization and carrying out of different activities – to achieve a maximum cumulative net savings for the firm and to reduce the volatility of its overall free cash flow and its probability of bankruptcy.” (Antikarov, 2012). Verbano and Venturini (2011) argue that the aim of ERM is to create value for a firm through integrated and proactive approach and that the “enterprise” in syntagme ERM is related to “removal of traditional functional, divisional, departmental or cultural barriers”. According to Farrell and Gallagher (2015) “ERM goes beyond focusing on just risk avoidance activities in recognition of the value to be gained from exposure to risks for which a firm has a strategic competitive advantage”. In their research Liebenberg and Hoyt (2011) have been oriented on discussing to what extent has the implementation of ERM programs in companies contributed to firms’ value increase. The results have indicated that ERM indeed does increase firm value measured by Tobin’s Q value that was significantly higher for companies that had implemented ERM. Further on the users of ERM programs differ from non-users in their financial characteristics such as size, leverage, volatility and in ownership characteristics. The empirical research by Miloš Sprčić (2013) on the sample of Croatian non-financial listed companies leads to the suggestion that by using the risk adjusted value approach it is evident that efficient risk management in companies can influence company value drivers and positively affect the overall company value.

## 6. CONCLUSION

The aim of this paper has been to present a literature review on the topic of ERM, factors that influence its implementation in the company, how it enhances company value, but also present some critiques of the existing ERM experiences. The conclusion that may be brought at the end is that there is a growing body of literature on the topic of ERM which is expected due to the actuality of the topic and its importance for contemporary organizations. The gap that is evident is that many existing research is theoretical and more empirical research is missing. It would be very interesting to conduct research on bigger datasets than the ones that are present in available literature and that are usually limited. This problem is related to the fact that access to accurate data regarding ERM is very limited, as previously discussed, on public sources and survey results. Also more research on ERM in different industrial sectors, ERM specificities in companies of different ownership and size and more qualitative research are encouraged.

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## PROVISIONS FOR LIABILITIES AS AN ACCOUNTING POLICY INSTRUMENT MITIGATING GOING CONCERN RISK

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### **ABSTRACT**

*Provisions for liabilities a very important financial category in the accounting and usually a significant position presented in the financial statements. They perform many different and important functions in business activity. Generally they are considered as the tool of protection against the business activity risk but they are also an instrument of accounting policy which allows the continuation of activities (preserve the principle of going concern) and determines the stable development. The papers is devoted to the problem of provisions considered in the context of the going concern basis one of the fundamental principles and concepts adopted in accounting and stipulated in national and international regulations. The objective of the paper is to analyze provisions as an instrument of accounting policy insurance against the risk of non-going-concern basis and to present the role and functions performed by the provisions in preserve the principle of going concern. The article concerns the issue of provision as a category of liabilities. Authors make an attempt to answer the question whether the provision as an instrument of accounting policy insurance against the risk of non- going-concern basis can be used. In order to achieve the goal of the study the authors conducted the literature review and the review of legal acts in the area of national and international accounting legislation. They applied the method of deduction and synthesis.*

**Keywords:** *provisions for liabilities, going concern, instrument of accounting policy, risk*

### **1. INTRODUCTION**

One of the prime goals of an economic entity is to continue its activity and growth as a going concern. In today's economy, in the times of intense competition, the volatility of financial markets, high economic risk and the economic crisis, it is not easy. A significant role in the strategy adopted by management is played by provisions recognised in accounting that ensure the enterprise's market presence and long-term sustainable growth. Provisions are an important reporting category, both in terms of a balance sheet and a financial result, affecting an enterprise's material and financial position presented in the financial statements. Therefore, they are one of the key accounting policy instruments. They are also seen as an instrument for hedging against the effects of economic risk associated with the likelihood of future costs, losses and liabilities. Through their functions, provisions facilitate an entity's continued operation, because they are an instrument neutralizing the consequences of unfavorable decisions and transactions. The paper is devoted to the problem of provisions considered in the context of going concern basis, one of the fundamental principles and concepts adopted in accounting and stipulated in national and international regulations. The objective of the paper is to analyze provisions as an instrument of accounting policy insurance against the risk of non-going-concern basis and to present the role and functions performed by the provisions in preserve the principle of going concern. The article concerns the issue of provision as a category of liabilities. Authors make an attempt to answer the question whether the provision as an instrument of accounting policy insurance against the risk of non- going-concern basis can be

used. In order to achieve the goal of the study the authors conducted the literature review and the review of legal acts in the area of national and international accounting legislation. They applied the method of deduction and synthesis.

## **2. PROVISIONS FOR LIABILITIES AS CATEGORY IN ACCOUNTING**

In accounting provisions for liabilities are considered as the classic accounting reserves, so-called reserves of strict sense. They are a category of liabilities widely understood and defined. Provisions are specific liabilities. Provisions for liabilities are category which is defined and qualified in the accounting law regulations. They are governed by the Accounting Act, National Accounting Standards and International Financial Reporting Standards (IFRS). The Accounting Act and International Financial Reporting Standards define provision as liability of uncertain timing or amount [IAS 37, „Provisions, Contingent Liabilities and Contingent Assets”, paragraph 25; Accounting Act of 1994, article 3]. According to the regulations, provisions constitute a special type of liabilities. In accounting law regulations a liability is defined as present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits. Classification of provisions as a category of liabilities results from the wide definition of liabilities in accounting regulations. The conceptual range of terms in this category specified in legal standards includes the following generic groups of liabilities:

- liabilities in the strict sense (trade payables),
- accruals,
- provisions and
- contingent liabilities [Poniatowska, 2017, p.156]

Provisions are probable liabilities of an uncertain nature. Defining provisions as a category of liabilities considerably limited the freedom of their creation by entities as a provision must meet all the requirements contained in the definition of a liability. It temporarily replaces the item of liabilities, i.e. until the entity becomes certain about the term and/or value [Kamieniecka, 2012, p.229]. To prevent a discretionary recognition of provisions and their potential use for manipulating the picture of the unit's financial condition and, first of all, its financial result, the accounting regulations define conditions that must be fulfilled to create a provision. The condition for including a provision in the accounting books is:

1. the occurrence of an event obliging the unit to provide a service in the future,
2. the possibility to reliably estimate the costs (or losses) the incurring of which is necessary for the fulfilment of the entity's duties.

Provisions can be recognised when:

1. an entity has a present obligation (legal or constructive) as a result of a past event,
2. it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and,
3. a reliable estimate can be made of the amount of the obligation

If these conditions are not met, no provision shall be recognized [IAS 37 2016, paragraph 14]. Under Article 35d, paragraph 1, of the Accounting Act, provisions should be recognised in respect of:

- certain or highly probable future liabilities whose amount can be reliably estimated, including in particular losses on pending business transactions, including on guarantees and suretyships granted, loan operations and the effects of current court proceedings,
- future liabilities resulting from restructuring if an undertaking is obliged to carry out the same based on separate legal regulations, or if binding agreements have been concluded in

this respect, and it is possible to reliably estimate the value of such future liabilities based on the restructuring plans [Accounting Act, 1994, Art. 35d].

The catalogue of provisions as a type of liabilities is broad, but it comprises two major groups:

1. provisions for uncertain liabilities,
2. provisions for losses on business operations in progress [Poniatowska, 2017, p. 356].

Provisions for uncertain liabilities are liabilities of unknown timing and amount. They represent an entity's potential liability, based on estimates, to the environment and its owners for expected expenses. These provisions are the amounts retained as liabilities, where there is doubt as to whether or not a liability will arise or it is certain that it will but it is unknown at what date and in what amount. The recognition of these provisions is intended to give the accurate representation of an enterprise's indebtedness and relates to an enterprise's future expenditure whose occurrence on the balance sheet date is sufficiently likely for it to be disclosed in the balance sheet. The examples of such provisions are provisions for: warranty repairs, employee benefits, restructuring, environmental protection, deferred income tax [Poniatowska, 2010, p. 448]. Provisions for losses from business operations in progress can be defined as provisions for the estimated scale of uncertainty of future effects of current business operations [Gmytrasiewicz, 1995 p.81]. The core of these provisions is the existence of uncertain losses, the effects of which should be attributed to a given reporting period. Their recognition is related to the risk and uncertainty of business activity, anticipating 'internal' threats and determined mainly by an entity's internal decisions. They are recognized to cover losses that occurred before the balance sheet date, but their amount and timing will be known specifically only after this date. The loss relates to ongoing operations (in progress), i.e. when under a bilateral contract neither party rendered a contracted service [Poniatowska, 2017 pp. 358-359]. The recognition of provisions for liabilities in accounting is related to economic risk, while the main reasons for their recognition are procedures for identifying and estimating risk [Gmytrasiewicz, Kierczyńska, 2007, p.8]. The recognition, valuation, use and release of provisions allow an enterprise to accomplish numerous complex goals. As a material balance sheet policy instrument, provisions for liabilities affect the value of assets and liabilities, costs, revenues, and net financial income. Therefore, they can be viewed as one of the most important balance sheet policy instruments. At the same time, through the functions that they perform in an enterprise, they reduce economic risk, shape the financial result and contribute to sustained growth.

### **3. THE GOING CONCERN ACCORDING TO POLISH AND INTERNATIONAL REGULATION**

A going concern is the principle that is adopted for the purpose of accounting conducted in an effectively operating economic entity. The adoption of the going concern assumption in the absence of any significant threats to the scope and coverage of an entity's operations determines the application of the remaining accounting principles that aims to present the clear and accurate picture of its material and financial position as well as financial performance [Duraj, 2004, p.62]. The going concern principle represents the fundamental accounting postulate for presenting and evaluating the assets of an enterprise and preparing financial statements. Literature identifies three basic areas for the consideration of the principle:

- the assumption that an economic entity operates, implementing the mission and the plan that have been set and pursuing the goals that have been defined,
- the condition that can be undermined,
- the fundamental principle of valuation and comparison [Gierusz, 2006, p.27].

The basic principle on which a financial statement is drawn up is the going concern principle. The going concern principle is defined both in national and international accounting regulations and in international standards on auditing. Pursuant to the Accounting Act [Accounting Act, 1994, Article 5, paragraph 2], management, while applying the accepted accounting principles (policy), assumes that an entity will continue its operations to a no lesser extent in the foreseeable future, without being put into liquidation or becoming bankrupt, unless this is inconsistent with the factual or legal state of affairs. This regulation included in the Act is based on the guidelines presented in the EU Directive [Directive of the European Parliament and Council] that assumes that an entity will continue its operations. The International Accounting Standard 1, in turn, stipulates that when preparing financial statements, management makes the assessment of an entity's ability to continue as a going concern [IAS 1, paragraph 25]. An entity prepares financial statements on a going concern basis unless management either intends to liquidate the entity or to cease trading, or has no realistic alternative but to do so [IAS 1 2016, paragraph 25; IFRS 570, 2010 p.99; Kumor, Poniatowska 2017, p. 805 ]. Under the Conceptual Framework of the International Financial Reporting Standards (IFRS), the going concern principle constitutes the basic assumption in the preparation of financial statements. The adoption of the going concern assumption involves the application of general rules for the measurement of assets and liabilities stipulated in the balance sheet law. In the situation when the going concern assumption is not justified, the measurement of an entity's assets and liabilities and the preparation of financial statements may have to be conducted according to different rules [The Conceptual Framework, IFRS 2016, paragraph 4.1; Accounting Act 1994, Article 29, item 1]. The Accounting Act sets out these rules in Article 29, specifying that the entity's assets are measured at net realizable selling prices no higher than their acquisition prices or manufacturing costs, less any accumulated depreciation or amortization charges as well as impairment losses recognized so far. Additionally, pursuant to the Act, the entity is also obliged to provide for any additional costs and losses resulting from the discontinuance or loss of ability to continue operations and to recognize these provisions and the adjustments to equity resulting from the revaluation [The Conceptual Framework for Financial Reporting 2016, paragraph 4.1; Accounting Act 1994, Article 29 item 1; Kumor, Poniatowska, 2017, p. 805]. Pursuant to IAS 1 and the Accounting Act, the obligation to assess the grounds for assuming that an entity is a going concern was imposed on an entity's management. While assessing the entity's ability to continue as a going concern, management takes into account all the available information concerning the future covering the minimum of 12 months from the balance sheet date. The scope of analysis depends on a factual situation. In profitable entities with ready access to the sources of finance, the scope of analysis may be limited, in other cases, management may be forced to consider multiple factors concerning current and expected profitability, debt repayment schedules and potential sources of alternative financing [The Conceptual Framework for Financial Reporting, 2016, paragraph 4.1; IAS 1, 2016, paragraph 25-26; Accounting Act 1994, Article 5, paragraph 2; Kumor, 2015, p. 131]. Pursuant to the Polish balance sheet law, the information on adopting the going concern assumption and potential circumstances indicative of a threat to continued activity should be included in the introduction to the financial statements or, in the case of microentities, in general notes. Information about the events causing that the going concern principle may no longer be applicable to an entity should be recognized in the financial statements and the accounting records for a relevant reporting period, if the entity received it after the financial statement had been prepared and prior to its approval. Information about the threats to the continuation of operation, if it does not change the existing status on the balance sheet date, must be disclosed in the notes to the financial statement. The information on the threats to an entity as a going concern have to be revealed in the notes to the financial statement. The notes should also include the description of actions, undertaken and planned by management, aiming to eliminate uncertainty [Accounting Act,

1994, Article 54, paragraph 1, Annex No. 1 and Annex No. 4]. In addition, IAS 1 recognizes the necessity to present the assumptions underlying the preparation of the financial statements and the reason why the assumption that an entity has an ability to continue as a going concern has not been deemed reasonable [IAS 1, 2016, paragraph 25-26; Kumor 2016, p. 451; Kumor, Poniatowska, 2017, p. 806 ].

#### **4. THE ROLE AND FUNCTIONS OF PROVISIONS FOR LIABILITIES UNDER THE GOING CONCERN**

Provisions for liabilities are an accounting policy instrument that allows an entity to survive and continue its business in a substantially unchanged scope. Due to their complexity and diversity, they are a specific accounting policy instrument. In an enterprise, they perform multiple yet interrelated functions, creating the system of functions performed by provisions [Poniatowska, 2013, p.120]. This system consists of coordinated, harmonized and integrated procedures and activities that are related to their creation and resolution, in view of likely future liabilities of an economic entity [Duraj, 2004, p.13]. The most important functions of provisions that allow an entity to continue its activity are:

1. reducing the economic risk taken by the entity,
2. shaping the financial result,
3. creating the stable development.

Conducting economic activity requires that the economic risk that is involved in this activity should be taken into account. Traditionally, provisions are considered a hedge against the effects of economic risk, so their recognition should be part of the overall risk management strategy in the enterprise. Managing an enterprise under uncertainty and risk conditions requires steps that will eliminate or at least mitigate their adverse consequences. Increased economic risk and uncertainty, caused by many factors, force companies to develop informed risk policy and risk management. One of the unconventional forms of hedging (broadly understood, not only as an insurance policy taken out in an insurance company) against the adverse effects of risk is the recognition of adequate provisions aiming to cover losses. Provisions are designed to counteract or neutralize losses. Legal risk regulation assumes that, as long as companies cover losses from the provisions recognized for this purpose, they are not subject to any external sanctions. Appropriate protection against uncertainty and economic risk by establishing adequate provisions is related to the proper assessment of their magnitude. A simple correlation exists between these categories, stating that the higher the degree of risk and uncertainty, the greater a provision should be and vice versa. The valuation of provisions for liabilities has to account for risk and uncertainty involved [Poniatowska 2016, p.224]. The primary purpose of recognizing provisions as a tool used to mitigate an entity's economic risk is to create the conditions for the entity to conduct its activity when it does not intend to cease or reduce it. This includes protection against liquidation and bankruptcy, the cessation or serious restriction of business activity or the sale of assets or part of the entity [Duraj 2004, p.17]. Provisions represent caution and foresight exercised by the management of an entity to ensure its continued operation. They condition the stable development of enterprises, shaping the size of internal financing, and determine future growth opportunities in the future. The amount of provisions recognized attests to the degree the entity hedges itself against economic risk and is used in financial analysis to assess the level of security, by means of a security factor, which is a ratio of provisions to liabilities. The higher the value, the greater the financial security of the enterprise and the lower the risk [Nowak 2010, pp.37-38]. Provisions give the accurate representation of the entity's indebtedness and signal the loss of internal sources of finance. They also allocate a portion of the financial result for future costs and losses. The compliance with the ongoing concern principle requires the recognition of provisions for liabilities, in particular for certain and likely losses arising from economic operations in progress.

The frequent reason why the entity ceases trading is the fact that it incurred losses that are not covered by current assets or funds allocated for this purpose in future periods (i.e. provisions). Provisions for liabilities are treated in accounting as a tool for creating an enterprise's sustained economic growth. An adequate level of provisions is necessary to keep an entity as a going concern, and their absence or limited amount may lead to impaired solvency or its lack. Provisions affect an entity's financial reliability and its profitability [Poniatowska, 2012, p.166]. An entity recognizing provisions has a greater chance of survival and development, its activity becomes stable through the elimination and reduction of the likelihood of the occurrence of events that may adversely affect the efficiency and effectiveness of its activity or threaten its continued operation. The recognition and use of provisions as an instrument of economic risk mitigation ensures that an entity has appropriate conditions for conducting its business, hedging its operation against scaling down or liquidation. The recognition of provisions in accounting is the result of the prudence of an entity that seeks to ensure the continuation of its operations in a variety of conditions. Under the accounting policy adopted in the entity, provisions can be used as a tool securing the sustained development of an enterprise. The appropriate level of provisions is required to maintain an enterprise as a going concern. Entities establishing provisions have a greater chance of survival and development and create greater stability by eliminating or limiting events that may threaten the continuation of their activity [Kumor, Poniatowska, 2015, pp.67-68]. The system of provisions recognized in accounting provides many opportunities to use them as a tool for creating sustainable development. The appropriate provision policy is the reflection of the wise and prudent policy of an enterprise, ensuring not only the continued operation of the entity, but also its continuous sustainable development. The recognition and use of provisions as an instrument of mitigating economic risk ensure that the entity has the adequate conditions for conducting business activities, protecting against scaling down or liquidation. The recognition of provisions in accounting is, therefore, the result of the prudence of the entity, whose purpose is to ensure that it continues as a going concern in various conditions. This prudence also results from the changes that occur in its environment.

## 5. CONCLUSION

Provisions for liabilities are one of the most important accounting policy instruments ensuring that an entity continues to operate as a going concern. They are a significant category in accounting presented in the financial statements. In accounting regulations, a provision is defined as a future liability of uncertain timing or amount. The role of provisions for liabilities in ensuring the continuation of the entity's operations is primarily manifested in the functions that they perform. They are an instrument of hedging against the effects of economic risk and a tool to create an enterprise's sustained development. As a category relating to the financial result, they are a profit management instrument [Poniatowska, 2016, p.263]. The recognition and use of provisions as an instrument of economic risk mitigation ensures that an entity has appropriate conditions for conducting its business, hedging its operation against scaling down or liquidation. Accordingly, it is the result of the prudence of an entity that seeks to ensure the continuation of its operations in a variety of conditions. This prudence also stems from the changes occurring in its environment and the constantly increasing risk involved in business activity. An entity recognizing provisions has a greater chance of survival and development, its activity becomes stable through the elimination or reduction of the likelihood of the occurrence of events that may adversely affect the efficiency and effectiveness of its activity or threaten its continued operation. Thus, the recognition of provisions helps an entity's management to implement one of the overarching accounting principles – the going concern principle [Poniatowska, 2013, p.125 ].



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## FINANCIAL DEPTH AND TOTAL FACTOR PRODUCTIVITY CHANGE: IS THERE ANY LINK?

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### ABSTRACT

*Research background: The relationship between financial depth (or financial development) and GDP growth has been the subject of numerous empirical studies. It is broadly accepted that the relationship between financial depth and GDP growth is non-linear and has the shape of an inverted "U" - financial depth fosters growth, but only up to a certain threshold, after which it becomes a drag on economic growth. In line with the growth theory, a distinction is made between total factor productivity (TFP) and labour and capital input as the sources of economic growth.*

*Purpose of the article: Our main goal is to examine the consequences of the level and dynamic of financial depth (measured as credit/GDP ratio) for the TFP change.*

*Methodology/methods: We use OLS fixed effect panel and dynamic panel estimation strategies to study relationships between financial depth (level and change) and TFP change, controlling distance to frontier and other control variables.*

*Findings & Value added: Our preliminary results are mixed: there is no empirical evidence supporting the initial view that there is a positive relationship between financial depth and TFP change.*

**Keywords:** *TFP, financial development, credit, growth*

### 1. INTRODUCTION

Relations between the dimensions of a financial sector and economic growth evoke growing interest. Recent empirical studies in the area of financial development - growth nexus show that this relation has the shape of an inverted "U". Up to a certain point, the growth of size of the financial sector fosters economic growth on account of removal of barriers in the financing of investment projects. Nevertheless, this effect disappears along with financial deepening and may even assume negative values. In a majority of cases, there are no studies on the channels via which the financial sector impacts economic growth. In line with the economic growth theory, growth may be decomposed into change in production factor inputs and Total Factor Productivity. The latter is interpreted in the categories of technological and organisational progress. In relation to this, the financial sector may impact growth through the following channels:

- A. Production factor inputs. Financial system limiting information asymmetry (and, more broadly, transaction costs) facilitates external financing of investment (in a macro-economic approach, mobilisation of savings and transformation of savings into investments) and, in the case of insufficient domestic savings, enables procurement of foreign savings. Thus, it limits financial friction.
- B. Total Factor Productivity. The financial system facilitates financing of research and, subsequently, introduction of innovations.

The article focuses on the relation between financial depth<sup>1</sup> (measured with the share of credit in the GDP) and TFP changes in a group of developed countries which belong to the OECD

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<sup>1</sup> In a majority of work from this area, the authors apply the term financial development. This is understood as the size of the financial sector (share of financial assets in the GDP or share of credit in the GDP). However,

and EU. The study covers among others Central and Eastern European countries. The subsequent part of the article is organised as follows: the first part discusses the condition of research on the relations between financial depth and economic growth. Afterward, the research method is presented, along with sources of data, whilst the last part of the study presents the preliminary results.

## 2. LITERATURE REVIEW

The financial sector plays a vital role in economy. The financial sector can contribute to economic growth by: producing ex-ante information about investment opportunities; improving ex-post monitoring of investment and exerting corporate governance; facilitating risk management and diversification; mobilising savings; and easing the exchange of goods and services (Levine 2005). Thus, the role of a financial system in economic growth should be regarded from the perspective of information asymmetry. In a banking system typical for a modern economy, the issue of information asymmetry is partially resolved due to the activity of financial intermediaries (banks) and organised financial markets. Intermediaries, when compared to other entities, have easier access to various sources of market information, are equipped with appropriate technologies for mass processing of data and can benefit from the scale and scope of the collected data. Initially, empirical studies unequivocally supported the visibly positive role of the financial sector in economic growth. Following the pioneering work of King and Levine (1993), a substantial body of literature has emerged, mostly confirming a strong and robust positive relationship between financial development (depth) and economic growth. Nevertheless, a conviction that this relation is of a non-linear nature soon began to be dominant. Financial development fosters growth only up to a certain threshold, after which it becomes a drag on economic growth (Cecchetti and Kharroubi 2012; Arcand et al. 2012; Beck et al. 2014). This relationship is particularly conspicuous in countries with average financial depth or economic development (some studies also point to the impact of the quality of institutions). However, if the share of financial transactions in GDP is high, this relationship may no longer hold true, or may even reverse. Arcand et al. (2012) demonstrate that this is the case once a threshold of 80-100% of credit in GDP is exceeded. Similar conclusions were drawn by Cecchetti and Kharroubi (2012), who set this threshold as a 90% ratio of private sector credit to GDP. It is broadly accepted that the relationship between financial depth and GDP growth is non-linear and has the shape of an inverted "U" - financial depth fosters growth, but only up to a certain threshold, after which it becomes a drag on economic growth. The threshold point depends on the definition of the financial depth and the research methods. Recent papers confirm the non-linear relationship between financial depth and GDP growth. Da Silva et al. (2017) research economic growth and its volatility and find a non-linear relation between financial depth and this variable. They argue that at moderate levels of financial depth, a further deepening increases the ratio of average growth to volatility; however, as financial depth increases, this relation reverts. Pietrucha and Acedański (2017) show that the post-2008 GDP response corresponds to a change of financial depth prior to the crisis, rather than to the financial depth itself. The increase of financial depth (credit to GDP ratio) prior to the crisis is statistically significant to the extent of GDP drop; in countries where the credit-to-GDP ratio surged prior to the crisis, the post-crisis response of the real sector was more pronounced. There are only a few papers that directly test the links between financial depth and Total Factor

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development is a much broader concept. Beck differentiates between financial depth and financial development. Financial depth refers to the volume of financial transactions in an economy (measured as the ratio of credit to GDP or bank assets to GDP). Financial development is a broader concept that comprises: financial depth, financial breadth (diversity of providers and segments of the financial system, including banks, capital markets and contractual savings institutions) and financial inclusion (access to and use of financial services by a large share of the household and enterprise population in a society).

Productivity. Beck, Levine and Loayza (2000) and Levine and Zervos (1998) show that financial development positively and significantly affects TFP. Arizala *et al.* (2009) estimate the impact of financial development on industry-level total factor productivity. They find significant relationship between financial development and industry-level TFP growth. However, Rioja and Valev (2004) find that the promotion effect on TFP of financial intermediation development only exists in developed countries. Tadesse (2007) find that between industrial technological progress and the development of banks, a significantly positive relationship exists, but the influence of stock markets on industrial technological progress is weak. Inklaar and Koetter (2008) suggest that the relationships between some traditional indicators of financial development and productivity are insignificant, but the efficiency of financial intermediaries has a significantly positive influence on productivity. In the most recent paper, Naceur *et al.* (2017) fail to establish positive relationships between most financial development indicators (not only financial depth) and TFP growth (with special emphasis on CCA and MENA countries). They conclude that the relationship is more complex, and the influence of the different dimensions of financial development on the sources of growth varies across income levels and regions. These very mixed results were a key motivation for this research. Simultaneously, literature lacks studies for Central and Eastern Europe countries, which was the second impetus for delving into this subject.

### 3. RESEARCH METHODOLOGY & DATA

The basic specification used in this paper follows the general regression model used in other studies (Levine 2005, Naceur *et al.* 2017):

$$g_{it} = \alpha + \beta F_{it} + \gamma X_{i,t} + \eta_i + \epsilon_{i,t}$$

where  $g_{it}$  represents growth in total factor productivity,  $F_{it}$  is financial depth.  $X_{it}$  represents the vector of macroeconomic control variables,  $\eta_i$  is a country-specific effect,  $\epsilon_{it}$  is the time-varying error term, and  $i$  and  $t$  represent the country and time period, respectively. TFP data was taken from the Penn World Table. The two most often recognised basic indicators of financial depth are either the ratio of bank credit for the private sector to GDP or the ratio of banking sector assets to GDP – both highly correlated. Most studies measure financial depth (financial development) by simplifying it as the ratio of credit to GDP. This is also the case in this paper. The raw data was obtained from the Global Financial Development Database (ratio of private credit by deposit money banks and other financial institutions to GDP and ratio of domestic credit to the private sector to GDP). The set of macroeconomic control variables comprise relevant variables in line with previous studies. They include, among others:

- human capital indicators (years of schooling)
- institution quality indicators from Worldwide Governance Indicators
- TFP level, which is proxy of distance from the technological frontier
- spill-overs via direct foreign investments.

The last indicator requires more detailed commentary. Investment links are computed as the ratio of FDI stock from country “j” to total FDI stock in country “i”. In line with these weights, TFP of the investment sources countries are taken into account in line with an assumption that as a result of FDI, there is also a flow of technology and know-how. As a result, the index of spill-overs via FDI may be shown in the following manner:

$$SE_{it} = \sum_{j=1}^N w_{jt} TFP_{jt}$$

i - country for which the index is calculated;  
 t - year for which the index is calculated;  
 j - countries which are the sources of investments;  
 w - weight resulting from the share of FDI from “j” country in the total FDI inflow to “i” country.

The full set of data is presented in Table 1.

*Table 1. Variables and data sources*

Abbreviation	Variable	Data source
TFP_L	TFP level at current PPPs (USA=1)	Feenstra <i>et al.</i> , 2015; available at: <a href="http://www.ggdc.net/pwt">www.ggdc.net/pwt</a>
TFP	TFP at constant national prices (2011=1)	Feenstra <i>et al.</i> , 2015; available at: <a href="http://www.ggdc.net/pwt">www.ggdc.net/pwt</a>
CS	Capital stock at constant 2011 national prices (in millions of USD)	Feenstra <i>et al.</i> , 2015; available at: <a href="http://www.ggdc.net/pwt">www.ggdc.net/pwt</a>
schooling	Human capital based on years of schooling	World Development Indicators, World Bank; available at: <a href="http://databank.worldbank.org/data">http://databank.worldbank.org/data</a>
PS	Political stability and absence of violence/terrorism	Worldwide Governance Indicators, 2016 Update; available at: <a href="http://www.govindicators.org">www.govindicators.org</a>
GE	Government effectiveness	Worldwide Governance Indicators, 2016 Update; available at: <a href="http://www.govindicators.org">www.govindicators.org</a>
PA	Patent applications	World Development Indicators, World Bank; available at: <a href="http://databank.worldbank.org/data">http://databank.worldbank.org/data</a>
R&D	Research and development expenditure (% of GDP)	World Development Indicators, World Bank; available at: <a href="http://databank.worldbank.org/data">http://databank.worldbank.org/data</a>
TO	Trade openness, i.e. the sum of exports and imports of goods and services measured as a share of GDP	World Development Indicators, World Bank; available at: <a href="http://databank.worldbank.org/data">http://databank.worldbank.org/data</a>
SE_FDI	Spill-over via FDI	Own calculation (Pietrucha, Żelazny 2017). FDI stock in the host economy, by geographical origin: Bilateral FDI Statistics 2014, UNCTAD; available at: <a href="http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDI-Statistics-Bilateral.aspx">http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDI-Statistics-Bilateral.aspx</a>
FD1	Private credit by deposit money banks to GDP (%)	World Bank, Global Financial Development, available at: <a href="http://databank.worldbank.org/data">http://databank.worldbank.org/data</a>
FD2	Domestic credit to private sector (% of GDP)	World Bank, Global Financial Development, available at: <a href="http://databank.worldbank.org/data">http://databank.worldbank.org/data</a>

Our panel comprises data for 41 developed and upper mid-developed countries over the period 1995–2014. We take into account 35 members of the OECD and the 6 EU states that are not in the OECD, i.e. Bulgaria, Croatia, Cyprus, Lithuania, Malta and Romania. Due to the fact that one of the motives for the conduct of research was inclusion of countries from Central and Eastern Europe which underwent system transformation, the number of periods which may be the subject of the study was greatly shortened. For the majority of these countries (on account of the difference of the economic system in the earlier period), only data from the mid-1990s may be taken into account (some of these countries even did not independently exist before 1990). In line with prior works, we employed 5-year, non-overlapping averages of the available data, which isolates and removes business cycle effects, focusing on the relationship between each financial indicator and the sources of TFP growth. First we estimate standard OLS fixed effect models using robust standard errors. Then the two-step difference GMM estimator is used with country specific effects. Set of instruments consists of lagged dependent variable,

differences and levels of other regressors. The robust White method for the estimation of standard errors which takes into account potential autocorrelation and heteroscedasticity of random components of the model was used. The models passed the basic tests of model specification correctness (the Arellano-Bond test for presence of 2-Level autocorrelation, the Hansen's over-identifying restrictions tests) verifying the correctness of the selection of the instruments.

#### 4. RESULTS & DISCUSSION

Table 2 show results from the OLS fixed effect estimation and Table 3 presents estimation using GMM. In the case of OLS, when the most important domestic determinants of TFP are controlled, financial depth displays a significant, positive impact on the change in TFP. The results do not suggest that the relation is non-linear, as it takes place in the case of relations of FD and economic growth (model II). There is also no evidence that the change in financial depth influences the change in TFP, e.g. whereas a credit boom has long-term implications for changes in TFP (model III). These conclusions are modified when the role of capital flows is taken into account in the form of direct foreign investments (model V). External effects related to FDI are statistically significant and result in the fact that the relation of domestic FD and TFP disappears. The sack of significance of the square of the financial depth and the change of FD remains. Using GMM we fail to establish any significant relationships between financial depth indicators and TFP change (models I-III in table 3). Results are robust when changing instrument and control variables.

Table 2 Results of the estimation (OLS)

	I	II	III	IV	V
TFP_L	0,50*** (4,09)	0,48*** (3,79)	0,49*** (4,24)	0,52*** (5,86)	0,53*** (5,30)
TRADE_O	0,00*** (5,39)	0,00*** (4,70)	0,00*** (4,21)	0,00*** (5,01)	0,00*** (4,81)
CS	0,00*** (2,87)	0,00*** (2,85)	0,00 (1,63)	0,00** (2,04)	0,00 (1,82)
PA	-0,00 (-0,13)	0,00 (-0,19)	0,00 (1,21)	0,00 (-1,13)	0,00 (0,29)
SCHOOLING	-0,00 (-0,04)	0,00 (-0,29)	0,02 (1,28)	0,00 (0,25)	0,01* (0,62)
GE	0,09** (2,03)	0,08** (2,09)	0,09* (1,92)	0,01 (0,29)	0,02 (0,60)
PS	0,06** (2,44)	0,06** (2,46)	0,04 (1,58)	0,08** (2,15)	0,04 (1,37)
FD1	0,00** (2,62)	0,00* (1,73)		0,00*** (2,69)	0,00 (1,50)
FD1^2		0,00 (-1,09)			
dFD1			0,00 (-0,16)		
SE_FDI					1,35*** (5,55)
R <sup>2</sup>	0,78	0,79	0,77	0,72	0,79
aR <sup>2</sup>	0,69	0,69	0,67	0,54	0,64
N	158	158	158	116	116

*In parentheses robust t-statistics are reported. Significant coefficients are denoted with stars (\*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$ ).*

It is also worth drawing attention to the results pertaining to control variables. Apart spill-overs via FDI, the quality of institutions and public policy is of vital importance, along with capital stock and openness of the economy (share of foreign trade in the GDP). These conclusions are

consistent with numerous studies (the significant role of spill-overs is confirmed, e.g. in the studies (starting with Coe and Helpman 1995 and including recent studies: Filippetti *et al.* 2017, Pietrucha *et al.* 2017). Human capital (years of schooling) turned out to be significant. Latter is surprising but not rare in the previous studies (Balta & Mohl, 2013).

*Table 3 Results of the estimation (GMM)*

	I	II	III	IV
TFP(-1)	0,59*** (10,36)	0,58*** (11,14)	0,59*** (9,80)	0,46*** (12,84)
TFP_L	0,31*** (9,00)	0,32*** (9,04)	0,31*** (9,26)	0,31*** (5,24)
TRADE_O	0,00* (1,71)	0,00* (2,00)	0,00 (1,62)	0,00 (1,56)
CS	0,00** (2,60)	0,00*** (2,87)	0,00** (2,59)	0,00* (1,93)
PA	0,00 (1,26)	0,00 (0,96)	0,00 (1,12)	0,00 (-0,32)
SCHOOLING	0,00 (-0,51)	-0,01 (-0,84)	0,00 (-0,45)	0,00 (-0,21)
GE	0,09*** (4,95)	0,09*** (5,43)	0,08*** (3,93)	0,03 (1,46)
PS	0,06*** (3,85)	0,06*** (3,76)	0,06*** (3,93)	0,06** (2,85)
FD1	0,00 (-0,31)		0,00 (0,29)	0,00 (-0,88)
FD2		0,00 (0,13)		
FD1^2			0,00 (-0,40)	
SE_FDI				1,06*** (6,19)
AR(1)	0.39	0.42	0.40	-
AR(2)	0.02	0.02	0.03	-
N	118	118	118	76
Instrument rank	22	22	24	23

*In parentheses robust t-statistics are reported. Significant coefficients are denoted with stars (\*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$ ). AR(1) and AR(2) contain the results of the Arellano-Bond autocorrelation tests in first differences.*

The results should be interpreted taking into consideration the restrictions related to the performed study. First of all, a relatively short period of time was studied. As mentioned above, the argument for adopting the specific set of data was the desire to include in the study former transformation countries - and for the majority of them, the data which is worth of analysing starts in the mid-1990s. Transformation of data into 5-year averages results in the fact that the number of time periods drastically shrinks. The data pertaining to the spill-overs of FDI refers to an even shorter period of time. This creates technical problem when estimating model IV in the table 3. Latter is showing only for the reason of coherence with the table 2 and should not be grounds for any conclusions. The second significant restriction is the fact of including the period of the 2007+ crisis in the study. Without doubt, the benefit of such solution is, on the one hand, the inclusion of current data and disruptions related to the financial crisis. On the other hand, this was an individual disruption that was significant enough to influence general conclusions. The third significant restriction is the fact that the study covers developed countries or countries with emerging economies yet with a relatively high GDP per capita.

Simultaneously, these are countries with a relatively high FD. This also means that it is impossible to rule out that in a broader study, also including low FD levels, its FD may be significant for the change of TFP. Nevertheless, in line with the presented results, in countries with at least an average level of FD, its increase is not significant for changes in TFP. The obtained results are closest to Naceur *et al.* (2017). In this study, the results are also mixed (even though procured via a different method and on a different group of countries), and conclusions showing the absence of relations between FD and TFP are dominant. There is no uniform evidence confirming the fact that financial depth has a clearly positive impact on productivity (it is worth emphasising that there is also no evidence of a negative impact). This issue undoubtedly calls for further in-depth studies.

## 5. CONCLUSION

The article examines the relations between financial depth and TFP. Literature devoted to the relations between financial depth and growth is characterised by a predominant claim that financial depth is conducive to growth - yet only to a certain level. In hitherto studies on TFP and capital growth, the preliminary results for TFP were greatly diversified. In this study, performed on a group of 41 developed countries (members of the OECD and EU) in the period from 1995 to 2014, it was impossible to confirm the relation between financial depth and TFP change.

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## **RUSSIAN FEDERATION TRADE EMBARGO AND IT'S IMPACT ON THE BALTIC STATES TRADE**

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### **ABSTRACT**

*With the growing different type of conflicts, populism and protectionism in the world it is much of a concern about economic development for many involved and affected countries. This paper addresses the Russian Federation trade embargo impact on the Baltic States in the context of the trade of affected goods in different categories: fish, dairy, meat, vegetables. Paper assesses extent of the impact on the industries export and export reorientation with regards to new export markets and new business strategies for the entrepreneurs in the Baltic States.*

**Keywords:** *Trade, Sanctions, Export, European Union, Russia*

### **1. INTRODUCTION**

Year 2013 was significant for geopolitical escalation in Europe over Ukraine. This led to different political decisions by European Union (EU) (European Union, 2014), United States of America (USA) (U.S. Department of State, 2014) and other countries to implement different type of sanctions against Russian Federation (Russia). In July and September 2014, the EU imposed economic sanctions targeting exchanges with Russia in specific economic sectors. In March 2015, EU leaders decided to align the existing sanctions regime to the complete implementation of the Minsk agreements, which was foreseen for the end of December 2015. Since the Minsk agreements were not fully implemented by 31 December 2015, the Council extended economic sanctions until 31 July 2016. In December 2016, having assessed the implementation of the Minsk agreements, the Council prolonged the sanctions until 31 July 2017. These restrictive measures:

- limit access to EU primary and secondary capital markets for 5 major Russian majority state-owned financial institutions and their majority-owned subsidiaries established outside of the EU, as well as three major Russian energy and three defense companies
- impose an export and import ban on trade in arms
- establish an export ban for dual-use goods for military use or military end users in Russia
- curtail Russian access to certain sensitive technologies and services that can be used for oil production and exploration

There were measures concerning economic cooperation as well. Restrictions on economic cooperation were introduced by EU leaders in July 2014:

- the EIB was requested to suspend the signature of new financing operations in the Russian Federation
- EU member states agreed to coordinate their positions within the EBRD Board of Directors with a view to also suspend the financing of new operations
- the implementation of EU bilateral and regional cooperation programmes with Russia was re-assessed and certain programmes suspended

As a response on 7th of August, 2014 Russia introduced asymmetric counter-sanctions (Правительство Российской Федерации, 2014) which determined trade embargo on different food products.

## 2. LITERATURE REVIEW

There are several economic risks between Russia and European Union. One of them is associated with trade of natural resources and geopolitics (Finon & Locatelli, 2008; Konoplyanik, 2012). Another risk is related to periodical market protectionism. During the past decade Russia has imposed import restrictions on different types of food and plant products from a vast number of countries, claiming to be acting on food safety scandals as the primary reason. However, most observers interpret these measures as acts of protectionism (Elvestad & Nilssen, 2010). Protectionism is observed also in other areas: automotive industry, pharmaceuticals (Zarocostas, 2014), service and investment barriers are observed as well (2014 National Trade Estimate Report on Foreign Trade Barriers, 2014). We also have to take into account the asymmetric nature of Russia's counter-sanctions. Two negative shocks can be observed in the EU28 export to Russian market. One is related to the 2008 economic crisis, that caused decreased market share from 8,74% in September 2008 till 5,16% in January 2010. After this decline, we could observe lots of fluctuations in the value of export, but still was with positive trend and maximum market share reach 8,7% in November 2012. Second decline we can observe after November 2012 with dramatic decrease of the export share by the end of the year 2014 (from 8,7% to 4,63%). Results of the year 2014 can be explained with counter sanctions from Russia that largely was targeting import restrictions to different product groups. On one hand EU28 is facing a challenge from the Russia's economic policy towards trade restrictions, but on the other hand EU28 is exploring alternative export markets (Priede & Pereira, 2015). The overall negative effect on Russia's gross capital inflow over 2014–2017 is estimated at approximately \$280bn. However, the effect on net capital inflow is significantly lower (\$160–170bn) due to Russian companies' self-adjustment, which is evidenced by their utilization of foreign assets accumulated earlier for debt repayment and an overall decrease in gross capital outflow. The sanctions' estimated effect on GDP is significant (–2.4 p.p. by 2017, compared with a hypothetical scenario with no sanctions) but 3.3 times lower than the estimated effects of the oil price shock (Gurvich & Prilepskiy, 2015). In the CEE the most suffered production sectors of the prolonged geopolitical crisis between the Russian Federation and Ukraine and the following Russian economic embargo is the dairy sector, followed by the meat sector. In the services sector – the main victims are the expedition and logistics companies. As the above mentioned sectors are ones of the most developed, heavily recruiting and GDP is contributing sectors in CEE economies in general, the negative effect of the embargo is tremendous both financially and intangibly. In addition, the unfavorable effects of the Russian embargo are enhanced by the protectionist politics of the EU old-timers and strong protective actions to save their own markets from competitive rivals from the younger EU members (Venkuvienė & Masteikiene, 2015).

## 3. RESEARCH AND FINDINGS

To assess the impact of the Russian embargo it is necessary to see the bigger picture starting with the total export from the EU and Baltic states to Russia (Figure 1).

*Figure following on the next page*

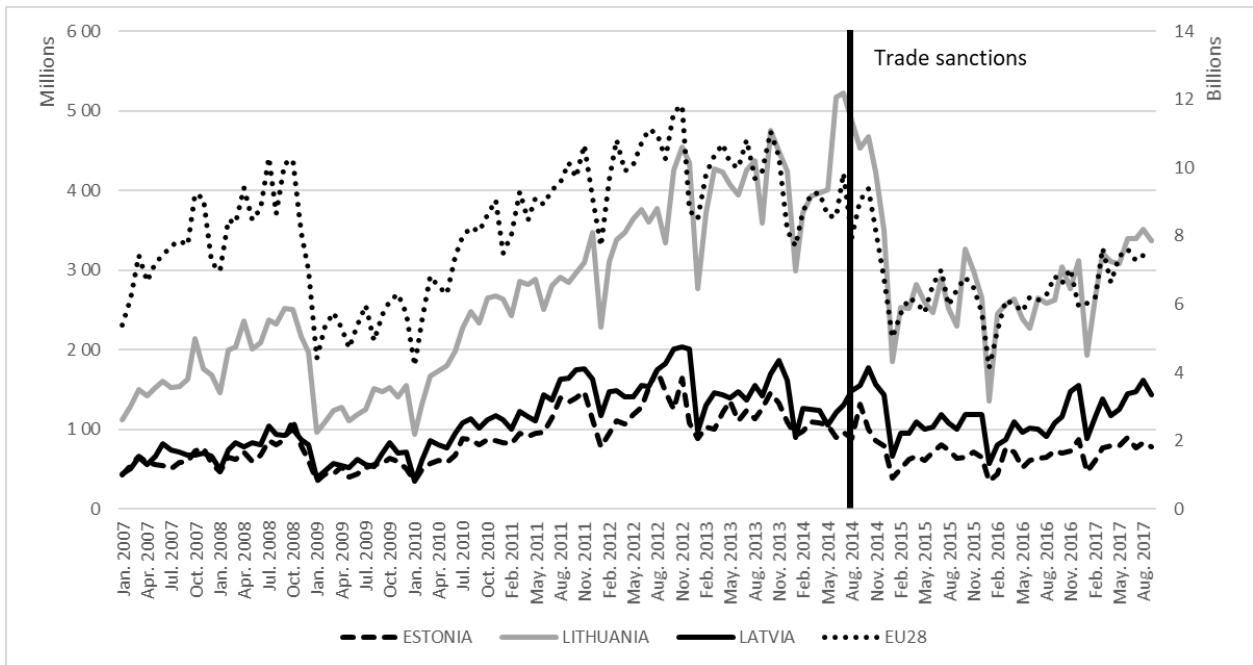


Figure 1: Total export of EU and Baltic states to Russia, EUR, monthly data from January 2007 till October 2017 (Eurostat, n.d.)

Figure 1 shows two major changes in the trade – world financial crisis and wide impact on economies across the globe in year 2008 and impact from the trade embargo in year 2014.

Authors decided to examine goods affected by the trade embargo from that Baltic states to Russia – meat, fish, dairy and vegetables (Figure 2).

Figure following on the next page

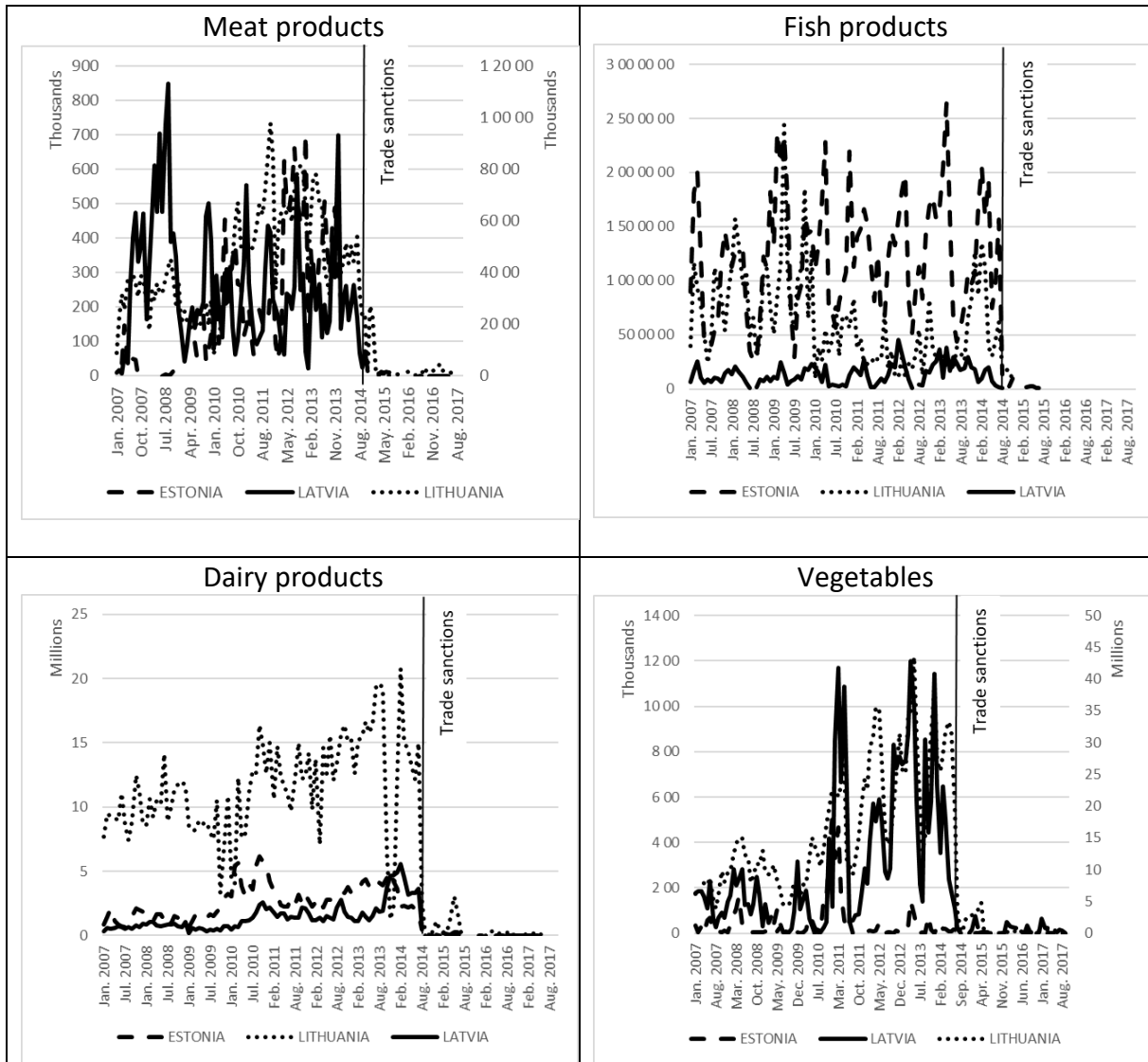


Figure 2: Baltic states export to Russia in the fish, dairy, meat and vegetable product groups (Eurostat, n.d.)

Figure 2 clearly shows that trade embargo stopped almost all trade in all four product groups (some trade remains in the specific sub-categories). This dramatic reduction in export to Russia forced Baltic entrepreneurs to think about strategies on how to overcome this situation. Solutions can be categorized in two groups: short-run solutions and long-run solutions. As one of the short-run solutions was evaluation of alternative routes to deliver goods to Russian market. One of these routs was found thru Belarus (Figure 3). Figure 3 clearly shows that Belarus was used as an alternative export market for final destination or re-exporting. The clearest it was in case of dairy products and vegetables. But this was just short-run solutions (in case of dairy products – just couple of months).

Figure following on the next page

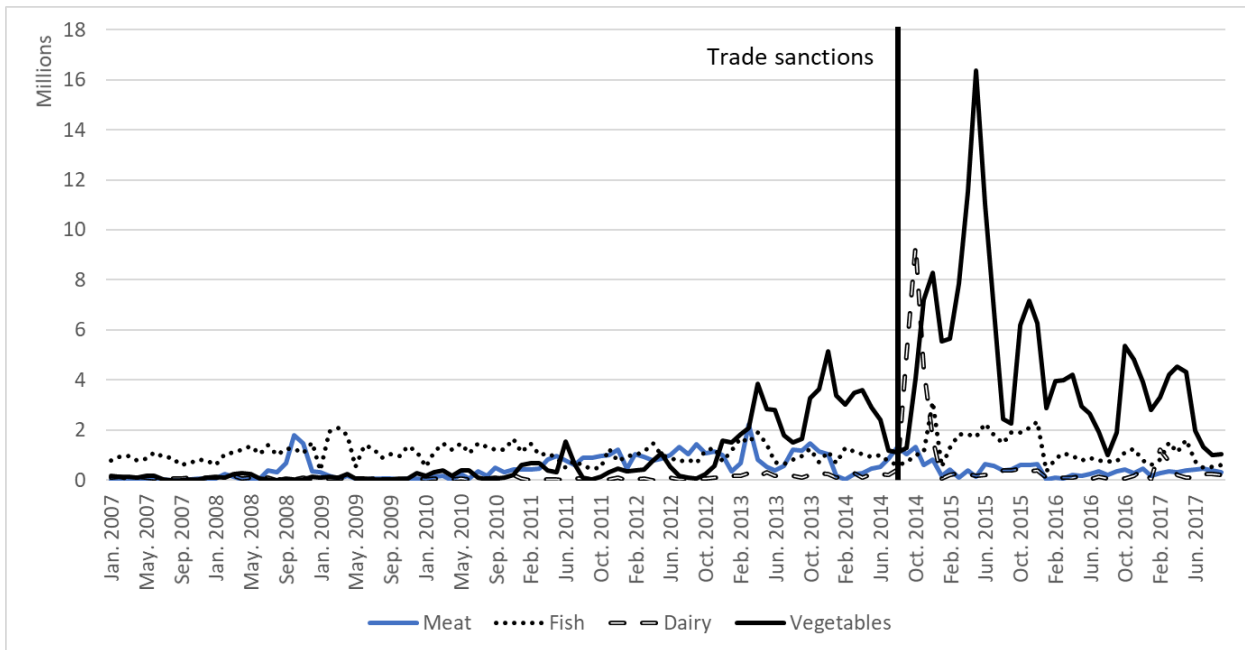


Figure 3: Baltic states export to Belarus in the fish, dairy, meat and vegetable product groups (Eurostat, n.d.)

For long-run solutions entrepreneurs might be considering two options: new export markets outside EU (which seems like a case since EU internal market is highly concentrated) or reorientation of production. For example, some entrepreneurs switched from milk production to live animal export and continued to export to Russian market (Figure 4).

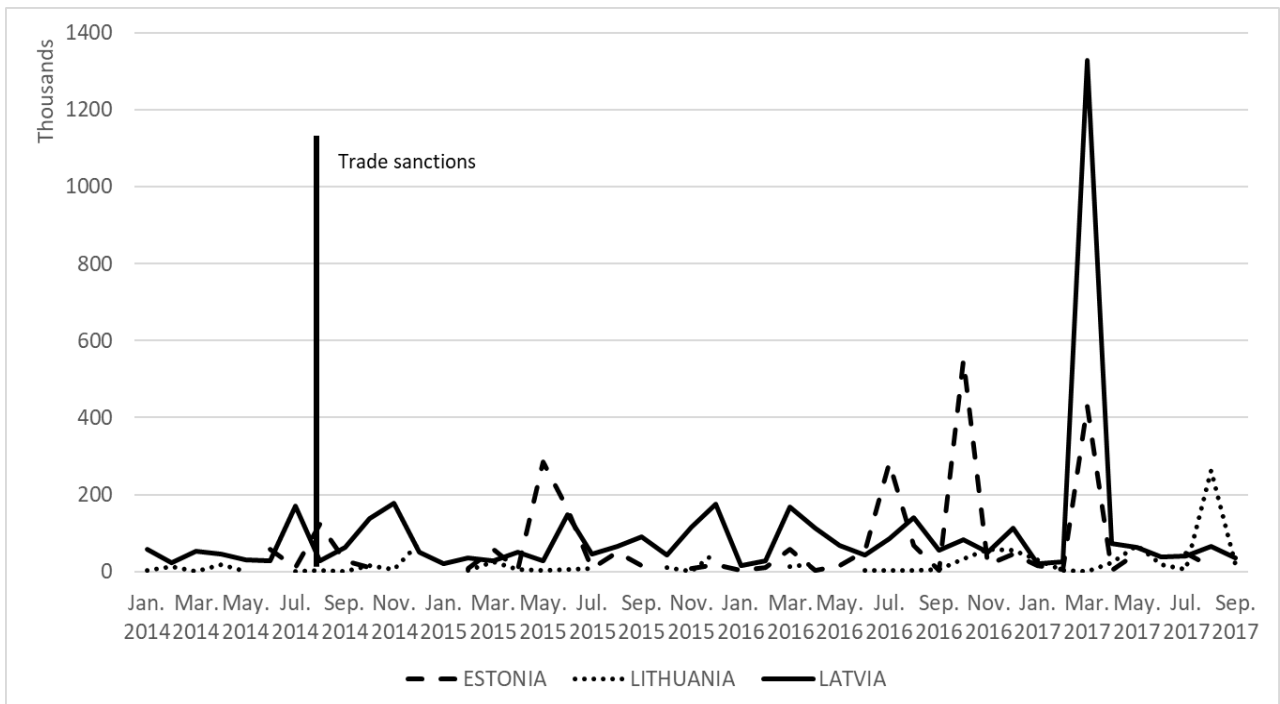


Figure 4: Baltic states export of live animals to Russia (Eurostat, n.d.)

As we can see in the Figure 4, entrepreneurs from the Baltic states are getting more active in export of live animals to Russian market.

#### 4. CONCLUSION

In July and September 2014, the EU imposed economic sanctions targeting exchanges with Russia in specific economic sectors. In March 2015, EU leaders decided to align the existing sanctions regime to the complete implementation of the Minsk agreements, which was foreseen for the end of December 2015. Since the Minsk agreements were not fully implemented by 31 December 2015, the Council extended economic sanctions until 31 July 2016. In December 2016, having assessed the implementation of the Minsk agreements, the Council prolonged the sanctions until 31 July 2017. As a response on 7th of August, 2014 Russia introduced asymmetric counter-sanctions with determined trade embargo on different food products. Russian trade embargo clearly indicated the necessity for the Baltic entrepreneurs for export market diversification. Baltic entrepreneurs were forced to search for extra demand in local markets and local EU markets and Extra EU markets as well. Some entrepreneurs changed their production to products that are not banned and continued to expand in Russian market.

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## **ECONOMICS OF PLATFORMS AND CHANGES IN MANAGEMENT PARADIGMS: TRANSFORMATION OF PRODUCTION SYSTEM FROM LINEAR TO CIRCULAR MODEL**

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### **ABSTRACT**

*The aim of this paper is to point to changes affecting managerial management models, resulting from the transformation of production systems. The beginning of the 21st century was marked by the transformation of capitalism and the existing industrial production systems. The classic linear production model was found to be under pressure from the changes that the post-industrial societies had at the turn of the century. Platform-based corporations have become the leading global corporations listed on the stock market capitalization. Classic linear management followed the fate of change management paradigms. Corporations from the platform economy model have modernized management strategies and created a whole new industry.*

**Keywords:** *circular model of production, demand side of production, platform-based organization, pipeline model of production, supply-side economy*

### **1. INTRODUCTION**

The end of the twentieth century and the beginning of the new era, in economic practice, will remain unchanged through the transformation of the classical capitalist mode of production into new systems of derived forms of capitalist production. The paradigm shift came as a result of the abandonment of the classic capitalist postulates that were based on labor and capital relations. Additionally, globalization has contributed to the geographic expansion of the capitalist mode of production, adapting to each individual system of society, according to the level of economic development, in which it has emerged. The changes brought with it by the postmodern and post-industrial society have had an equally devastating effect on the social system of production as well as the changes that the frustration of the First Industrial Revolution. The classical work and capital relationship is replaced by ownership of information. The processes that began after the Third Industrial Revolution in the middle of the last century continued the development of the fast Internet and complete digitization of all types of industries. The Internet-supported industry and digitalization of all forms of social life have accelerated the processes that scientists recognize as the Fourth Industrial Revolution. The modern development of economic activity is marked by Web 2.0. model and process management of the name Industry 4.0. As a result of the above-mentioned development, corporations from the new mode of production have taken the lead in the rankings of the world's most valuable corporations. Their business model was named the economy of the platform. Five of the top global corporations on the global market, according to capitalization, were from the platform economy model.



## 2. DEVELOPMENT AND TRANSFORMATION OF BASIC MANAGEMENT PRACTICES

Digitalization of all spheres of social life and, consequently, economic activities, has crucially influenced the change of direction and methods of managerial management in post-industrial societies. Changes affecting the economy after the emergence of corporations from platform economics shook existing management practices to the ground. Economic analysts have already emphasized at the beginning of the century that the changes that the economy will bring to the platform will be as dramatic as the changes that the steam machine has introduced in the economy. The economic system built with a steam engine, in its basic settings, remained unchanged until the platform economy model emerged. The first industrial revolution, at the end of the 18th century, laid the foundations for a system that would describe Adam Smith in the Wealth of Nations as the invisible hand of the market. Standardized production, division of labour and low production costs, associated with the low wages of poor workers, will enable the realization of commodities in the supply and demand collision system. The overriding model of the firm historically used is predicated upon companies buying raw materials (inputs) and transforming them into outputs before selling to downstream customers at a profit. The success of these business is typically driven by their ability to buy efficiently (low input cost), add value (through design, efficient manufacturing etc.) and sell resulting products and services with a high margin (through distribution networks, retail shops etc.) (Reillier, Reillier 2017: 41). The Second Industrial Revolution will wipe out supply and demand laws. The beginnings of modern management, already at this early stage, will become obsolete by the invisible hands of the market. Chandler will later in the book „The Visible Hand: The Managerial Revolution in American Business”, write about the complete change of the paradigm and the visible hand of the market. The development of management as a science, but also everyday practice, will hamper the iron market laws and the formation of prices in the collision of supply and demand. A hundred years later, management will be the decisive factor in forming and managing the models of platform economics. Schumpeter, an economist from the famous Austrian school, will emphasize the need for constant technological advancement as the foundation for economic development. However, Hildferding would point out before Schumpeter that after the Second Industrial Revolution the main driver of innovation was a large company with the help of applied science, and no more entrepreneurs in the workshop from the time of the invisible hand of the market (Michealides, Millos 2005). Modern management strategies and the organization of global networking platforms, which require strong and stable funding, will be the foundation of the development of the platform's economy. Already after the Second Industrial Revolution, the foundation for this kind of corporate development was set. The third industrial revolution, from the mid-twentieth century, will set the foundation for the development of an information society that will experience its climax with the emergence of the Internet and the development of global corporations. Web 2.0, the post-industrial society and the development of the platform's economy model, are based on the features of the Fourth Industrial Revolution. The period after the Third Industrial Revolution and the change of fundamental production chips is the fundamental content of the book Post-capitalist society, the guru of Peter Drucker's management. In Drucker's paper, the old factors of production land, labor and capital are replaced by new factor – information (Drucker 1993). In the time of the book's creation, the world in which information yielded a competitive edge has just left its roots. Today, business in the economy of the platform is only about collecting and processing information. The industrial production system, defined after the First Industrial Revolution, is fully absorbed only after the development of an industry based on electricity and oil. The 20th century will remain marked as a period of full affirmation of management systems. As early as 1930, Robert Coase set the foundations of the firm's theory, which will remain a sign of further development of management theory. The development of industrial production of goods and the associated cost

theory will be the basis of Hendersen's theory of scale economics. The firm's theory and scale economy will become the most well-known of all the managerial theories, Porter's Industry Analysis. All the theories that will be developed later, especially resource theories and the theory of hypercompetition, will find the source in Porter's Industry Analysis. Porter's Industry Analysis and the related Chain Value Theory will become a fundamental point for the analysis and comparison of classic pipeline models of industrial production with the circular models of the platform economy. The value chain analysis for organizations from classical linear business and production of goods and services was some sort of fundament for analyzing the entire production of physical goods and services by the end of the 20th century. By the transformation of capitalism into the western hemisphere, ownership of information and information production, it transforms porter's analysis into a part of history that goes along with industrial production in the east. The factory floor where, from the time of Adam Smith and the invisible hand of the market, where produced physical goods and services, was replaced by collecting, sorting, processing and sharing information as goods in the exchange process. We are in the midst of an epic change in the nature of work. The First Industrial Revolution ended slave and serf labor. The Second Industrial Revolution dramatically shrank agricultural and craft labor. The Third Industrial Revolution is sunsetting mass wage labour in the manufacturing and service industries and salaried professional labour in large parts of the knowledge sector (Rifkin 2014: 160). The Fourth Industrial Revolution is one of the foundations of classical capitalism. The platform economy changes the nature of control in the system of production of goods and services.

## 2.1. Supply side economy

The term supply side economy first was used by Herbert Stain in paper presented in 1976. Stain, a former economic adviser in the Nixon administration, used the term "supply side economy" to refer to the fact that this doctrine focused on only a specific aspect of the supply side: the fiscal aspect, and in particular the tax aspects. Later that year, Jude Wanninski simplified to "supply side economics" (Atkinson 2008: 49). I wish we had a better term for the great advances in economic understanding that began in the mid-1970s and became known as "supply-side economics." It was really an expansion of the Classical school of economics, which most people trace to Adam Smith and his precursors such as Cantillon or Hume (Lewis 2016). In the twentieth-century industrial era, giant monopolies were created based on supply economies of scale. These are driven by production efficiency, which reduce the unit of creating a product or service as the quantities produced increase. Those supply economies of scale can give the largest company in an industrial economy a cost advantage that is extremely difficult for competitor to overcome (Parker et.al. 2016: 18).



*Figure 1: Porter Value Chain*

The supply side economy is linked to the welfare state and experiences its peak in the middle and after the middle of the twentieth century. Atkinson (2008: 23) highlights two fundamental conditions that were fulfilled at a time when the supply side economy was at its peak: 1) supply-siders are more interested in boosting long-term growth than in managing the business cycle can be managed and 2) for many supply-siders, the ultimate gauge of economic well-being is

not income, but wealth. Supply-siders built their thesis mainly on classical assumptions: a) perfect competition, b) wage and price flexibility, c) upward-sloping supply curve, d) the economy being in the state of full employment. Supply-siders argue that real output of an economy is determined in the medium term by the supply of real factors – labour and capital – and change in the technology (Dwivedi 2010: 372).

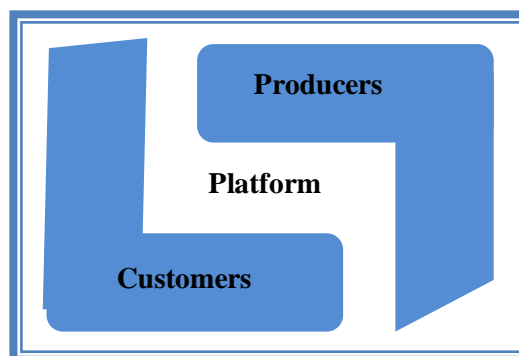


*Figure 2: Physical Product Flow*  
*Source: Moazed and Johnson, 2016, 25.*

Just as the growth of the economy was at its peak, and the organization's surroundings were still relatively stable, the porter issues an industry analysis focused on defining a business model in the supply side of the economy. Porter's value chain, as shown in Figure 1, detracts the direction of movement of materials within the production cycle, from the input of raw materials to the sale of finished products on the market. The production system model shown in Figure 2 has emerged since the First Industrial Revolution. Henry Ford and the assembly line will make it the most efficient production system since the production of industrial output. In the context of the platform economy and comparison of the value-added system, it will remain as a classic linear production line. Linear business focus on creating value internally and selling that value downstream customers. Value flows from left to right, from the manufactures down to the customers (as in Figure 1). In this word, the resources a business owns and controls internally are its most valuable assets (Moazed, Johnson 2016: 25). Movement of raw materials and semi processing from left to right, in classical linear business, we find also called pipeline business model.

## 2.2. Demand side economy

Supply side economics is a retreat from Keynes. Keynesian economics was basically a demand side economics which dominated the economic scene since 1936 (Kennedy 2011: 353). In the twenty-first Internet era, comparable monopolies are being created by demand economies of scale (Parker et. Al. 2016: 19). The expression appears for the first time as a result of the effort to determine the concept of creating a network effect. The authors are called Hal Varian, the chief economist at Google, and business professor Carl Shapiro. Demand-side economy of scale are also known as „network externalities“ or „network effects“, since they commonly occur in network industries. Formally, a good exhibits network effects if the demand for the good depends on how many other people purchase it (Varian et.al. 2004: 33).



*Figure 3: Platform business model*  
*Source: Moazed and Johnson, 2016, 26.*

In accordance with the traditions, the Keynesian demand side economy is based on increased aggregate market demand. In the context of the economy of the platform, the demand side economy represents an effort of the platform management to attract as many customers as possible to create and continuously increase the network effect. Demand economies of scale are driven by efficiencies in social networks, demand aggregation, app development, and other phenomena that make bigger networks more valuable to their users. They can give the largest company in a platform market a network effect advantage that extremely difficult from competitor to overcome (Parker et.al. 2016: 19). Unlike the supply side economy, which is based on exploiting the curve of experience and lowering the cost per unit of production with each new unit of production, demand side economy is growing with increasing demand. When network effects are presents there are normally multiple equilibria. If no one adopts a network good, then it has no value, so no one wants it. If there are enough adopters, then the good became valuable, so more adopt it – make it more valuable (Varian et.al. 2004: 34). As shown in Figure 3, the economy of supply in the context of the platform economy leaves the pipeline model. It is no longer oriented to the supply side and does not address raw material input into the production process. Demand side of economy character implies attracting users to the platform and facilitating interaction among them. Organizations from the model platform are oriented to the demand side economy and to replace the classical linear model with a circular model.

### 2.3. Platform economy

By the contrast with supply economies of scale, demand economies of scale takes advantage of technologies improvements on the demand side – the other half of the profit equation from the production side (Parker et.al. 2016: 19). As we have already pointed out, in the supply side economy model, the goods and service providers fully control the production process and create value in it. In this regard, Porter focuses on his Value Chain Theory highlighting the analysis of individual stages within the Value Chain to create conditions for the development of the company's competitive advantages. The platform economy organization does not produce goods and services, does not directly controls production processes, and consequently does not control the creation of value within the manufacturing process. As the ultimate result of the organizational process, we conclude that organizations from the economics platform are completely different from organizations from classical linear business.

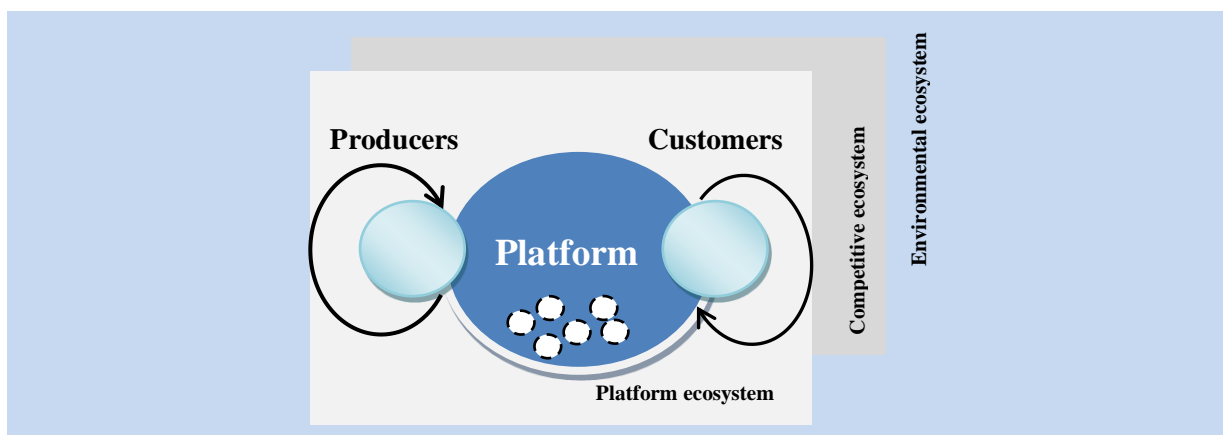


Figure 3. Platform ecosystem

Source: Own illustration

\* ↻ Developers/Applications

How can we differentiate the model of the economy of the platform from the classical pipeline model, and how make distinction of organizations from the model economy of platforms from organizations from classical linear business? What is so specific for the platform model and we cannot find that in pipeline model? A platform is a business model that facilitates the exchange of value between two or more user groups, a consumer and producer. In order to make these exchanges happen, platforms harness and create large, scalable networks of users and resources that can be accessed on demand. Platforms create communities and markets that allow users to interact and transact (Moazed, Johnson 2016: 29). The model of the economy of the platform can be determined as "economic catalyst" with: a) two or more groups of customers; b) who need each other in some way; c) but who cannot capture the value of mutual interactions on their own; and d) rely on the catalyst to facilitate value-creating interactions between them (Evans, Schmalensee 2007). Platform business creating significant value through the acquisition, matching and connection of two or more customers groups to enable them to transact (Reillier, Reillier 2017: 22). The classic management strategies of the twentieth century have very damned domains if applied in the platform economy. As shown in Figure 3, the model of the economy of the platform, completely abandoned model supply side economics, and is based on the demand side economy. Users are attracted to the platform and process encoding occurs in user interaction. The Platform ecosystem consists of a platform that provides services of interaction between the users, the users that we share to the producers and consumers, and the developers who develop applications that users recognize as the value on the platform. The classic piping business was based on the production of goods that he sold on the market and used the models to push the goods on the market. Regardless of the size of the organization and market capacity, there was always only one targeted market where the goods were realized. The model of the economy of the platform uses a model of a two-side or multi-side market. Two-side market are places where both buyers and sellers gather because of each other, rather than to trade with the firm. This create enough variety (through a market) to serve customers' needs. A platform emerges, creating favourable conditions for exchanges to happen which could be controlled by the same firm or which could have disrupted the original offerings (Irene 2014: 193). Multi-sides platforms are organizations that create value primary by enabling direct interactions between two (or more) distinct types of affiliated customers (Hagiu, Wright 2011).

### **3. COMPARISON PIPELINE ECONOMY MODEL VS. CIRCULAR ECONOMY MODEL**

In the process of comparing the model of pipeline economy and platform economy, it is important to emphasize that they cannot pull the firm boundaries and determine the exact differences that each model defines. As the classical linear model overwhelmed when compared to the underlying factors of liner production and linear service system, we find similarities and differences between linear and circular models. As shown in Table 1, there are similarities and differences compared to the three basic business models

*Table following on the next page*

*Table 1. How platforms differ from product and services as market potential differences*

<i>Market potential differences</i>			
<b>Attribute</b>	<b>Product</b>	<b>Service</b>	<b>Platform</b>
Scale economies potential	High	Low	<i>Extensive</i>
Customisation by end-users	Limited	Potentially extensive	<i>Extensive</i>
Market	Segments	Segments	<i>Microsegments</i>
Long-tail potential	Low	High	<i>Very high</i>
Lock in potential	Low to medium	High	<i>Very high</i>
Network effects potential	Low	High	<i>Very high</i>
Revenue model	Lump-sum sale	Revenue stream	<i>Revenue stream</i>
Margins in competitive market	Low	Low	<i>Potentially high</i>

*Source: Tiwana, 2014, 52.*

Platforms offer the possibility of extensive weighting potential in economics of scale and customization by end-users. By comparing it with the classic linear model, economies of scale are acceptable in the production of physical products, but not in services. By customization by end-users, the situation is exactly the opposite because it cannot be expected in the production of physical products, but for services this is the expected way of doing business. In the process of market development, the platforms range from the development of micro-segments and cover very specific market niches. The classic linear business captures market segments and defies the winning segments of management strategy models that are not applicable to platform operations. Unlike the linear model, the circular economy successfully utilizes potentials that cannot be efficiently and efficiently utilized in classical business. Platforms create competitive advantages using long-tail potential, lock in potential and network effects potential. The classic linear production of physical products is determined by production capacity, product standardization, and focused on the selected market segment, and can hardly compete in the three market potentials used by platforms. However, the fundamental difference that defines the new circular economy is based on a potentially high margin in a competitive market. Classic pipeline business are competing in the old industries with very low margins and without significant market growth rates. The economy platform opens up new markets, creates new industries, markets grow steadily, and as a result, they are high profitable rates.

*Table following on the next page*

Table 2. How platforms differ from product and services as management-style differences

<i>Market potential differences</i>			
<b>Attribute</b>	<b>Product</b>	<b>Service</b>	<b>Platform</b>
Innovation mode	Planned	Planned	Emergent
Management model	Command-and-control	Coproduction with customers	Orchestration
Critical success factor	Good management	Process rigor	Orchestration
Key tension	Predicting and anticipating consumer preferences	Customisation to idiosyncratic consumer needs	Ecosystem partners autonomy versus ecosystem-wide integration
Start-up bottleneck	Attracting customers	Attracting customers	Attracting both sides

Source: Tiwana, 2014, 52.

While comparing business operations to the platform in the context of market potential can find some similarities between the platform model and the classic linear business, management models could not tell. The platform economy has developed entirely new ways of management. Managerial management and management strategies of the 20th century have become useless in circular business. Managerial Business Management Models Include Sharp Planning, Command and Control, Process Rigor, Perceivable and anticipating Consumer Preferences. The embarrassing difference that separates the management mode of platform management from pipeline management is found in start-up bottlenecks. As shown in Table 2, the classic linear business model is based on the model of attracting customers. Platforms must attract both sides if they want network effects and develop business from the beginning on sound ground.

#### 4. DIFFERENT MINDSET TOWARD BUSINESS STRATEGY

The established difference between organization management from model platforms and organizations from the classic pipeline model comes from controlling value creation for consumers. In classical linear business, value is generated in the production of goods and services, and managers are in charge of managing the production process. In the platform economy, value is created by user interaction on the platform, and user communication is the "Factory floor". A completely different way of creating value on platforms from creating value in the pipeline business has resulted in a complete turnaround in business management. The basic features of this shift are listed in Table 3. Tiwana (2014: 52) lists five fundamental factors that are the bearers of a managerial paradigm shift: a) migration from product competition to platform competition; b) organizational boundaries blur; c) architecture matters; d) evolutionary fit – not just efficiency determines a platform's fate and e) coevolution of architecture and governance. We have already mentioned that the value on platforms is not created in the direct production of goods. Consequently, the market moves the focus from the production of goods to the interaction of users who realize key transaction on the platform. In the process of interaction, commoditization of goods and services takes place, and the platform realizes revenue from any of the monetization methods chosen by the management platform. The organization of companies in the platform model follows the post-industrial model of organization where the boundaries of the organization are blurred. The platform architecture is tailored to user interactions on both sides of the platform. Attracting and matching users engage in matching their ecosystems to continually increase the value of the platform. Organizations from classical linear business are more moderate business efficiency due to market saturation within the competing industry. By contrast, platforms are deployed within the emerging industry and strive to win as much free market as possible before competing platforms emerge. Construction of platform architecture and management style of stone management are the cornerstones of the successful development and growth of each organization from the platform's economy model.

*Table 3. How platforms thinkers requires a different mindset toward business strategy*

<b>Driver</b>	<b>Traditional product/service markets</b>	<b>Platform markets</b>
Migration from product competition to platform competition	A good product that offers a valuable value proposition to customer has a fair shot in the market	Rival platforms ecosystems compete with each other; a good product without a compelling ecosystem has no shot in the market
Organization boundaries blur	Coordination is achieved through authority and command and control structures	Conventional coordination mechanisms cannot scale to large platforms; alternative coordination mechanisms must be created
Architecture matters	Architecture matters enters strategic thinking beyond centralized and decentralized organization design choices	Architecture provides the blueprint for coordination across thousands of ecosystem partners where conventional coordination mechanisms fall apart
Evolutionary fit – not just efficiency – determines a platform fate	Focus on operational efficiency and maximizing predictability	Platforms that evolve faster outlast their rivals
Coevolution of architecture and governance	Architecture of products and services are designed separately from the governance that producer them	Architecture and governance are the two gears of a platform's evolutionary motor; the two must be mutually reinforcing, interlock, and coevolve

*Source: Tiwana, 2014, 53.*

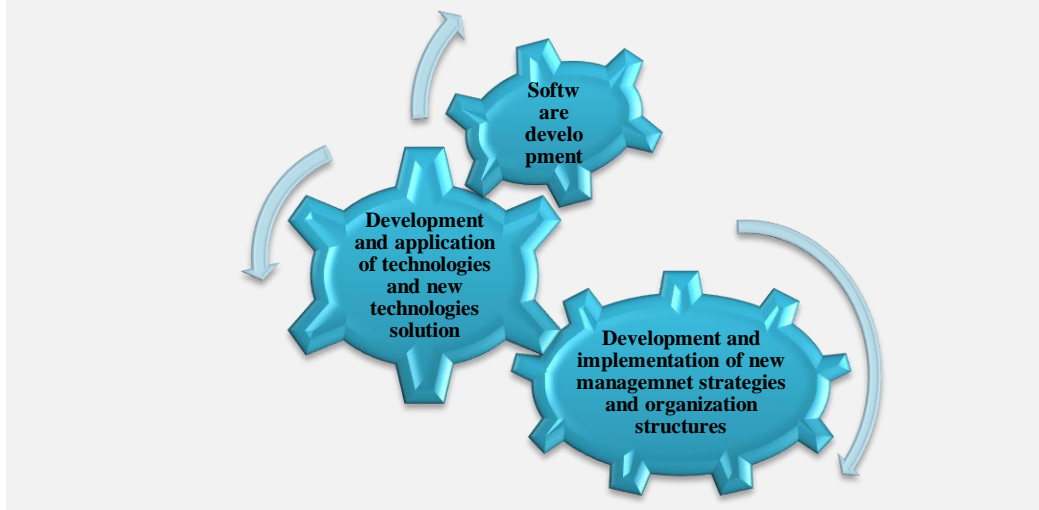
## 5. DISCUSSION

In the late summer of 2011, Marc Anderson, a co-founder of Netscape and a venture capital investment firm, Anderson-Horowitz, in Wall Street Journal, expressed his opinion of how "software eats the world" (Choudary 2015: 17). Anderson referred to companies such as Google and Amazon that had been slowly replacing traditional leaders in the classic industries with new business models. The paradigm of "world-eating software" has become the global vision of all novice investors in some form of digital business. Fred Wilson, the founder of the venture capital venture, and an investor in today's well-known platforms such as Twitter, Etsy, Lending Club, Tumblr, Foursquare, SoundCloud and Kickstarter, has gone a step further in explaining software development and its impact on the business world. He pointed out that nothing can be completely protected and any software can be copied or made with even better features. What makes business value networks are users, transactions and data processing (Moazed, Johnson 2016: 78). Wilson confirmed Andersen's claims, but he went a step further. He emphasized that software is no longer sufficient because the business world is already fully adapted to the development of modern software and daily upgrades. The three core pillars on which a modern corporation has been built into the platform's economy consists of a combination of software development, development and application of new technologies and technology solutions, and management development and new strategy models in managing the organizations in the "new economy". As shown in Figure 4, all three components of the process participate in building organizational performance. Each corporation passed on itself an optimal combination of core components. How many components will be used to solve everyday problems depends directly on the degree of development of an organization and on the development phases according to the organization's life-cycle. All three basic pillars of the organization are oriented towards the internal structure, but at the same time they communicate continuously with the organization's surroundings

*Figure following on the next page*



Figure 4 The three pillars of corporate development in the platform economy model



Source: Own illustration

New companies that run a business in the platform model, whether they go from scratch or have some business model, causing profound disruption to the existing traditional business model in the competing industries. The disappearance of Nokia or BlackBerry, Uber and Lyft's success is a sign of profound changes within the competing industry. Meanwhile, individuals and brands targeting niche markets gain unprecedented success using global business platforms. Teenagers build highly profitable businesses using You Tube, while many freelancers are creating the foundation for a better life through the Upwork platform than they could afford to work for others or even setting up their own business.

## 6. CONCLUSION

The time in which the economy of the platform is created is the backdrop of many scientists in the field of economics, but also in other social and other sciences. The end of the century marked complete digitalization of production and all other social interactions. Marx considered that by the end of the 20th century, the end of capitalism, which was created as a product of labor relations and capital, would be marked. Kondratiev disagreed with Marx, which was fatal to him, but he was right in part when he claimed that capitalism would be transformed as it did in earlier times. One could conclude that both of them were right in that Kondratiev theory of business cycle was much closer to the explanation of the emergence of a new form of capitalism than Marx. Already after the development of capitalism in the nineteenth century, Marx was aware of the development of science that pervades practice. In his notebooks, he worked out notes on the importance of technology development that will contribute to the general development of society. The notes have never been published in full, and long after his death, he will appear under his original name - Grundrisse. Special attention will be given to the part that Marx called "The Fragments on Machine". It emphasizes the importance of machines that are developing in a way that takes over the production process in such a way that man no longer manages the process and is no longer a key part of it. The platform economy does not control the production process of goods and services, and thus does not control the value generated by machines in the production process. Marx conceived the economy in which the main role of machines to produce and people to control them. He was clear saying that in such a economy the main production power was information (Mason 2015: 183). The industrial development that has transformed into the information age has confirmed most of what Marx put in the "The Fragments on Machine". By developing the economy of the platform and the "sharing economy", which was marked by the transformation of capitalism, Kondratiev proved that he

was right when he wrote his Business cycle theory. In 2016, the list of the largest global corporations by market capitalization of the top five were all from the platform economy model. Information management instead of production of goods and services has taken the lead in the market. The change in global business paradigm is the result of the overall change in social relations that reflected on economic trends. These changes were primarily the product of software development, the development of modern technological algorithms, and the finding of new managerial management strategies. All three changes orchestrated in one production process resulted in the development of completely new models of organization development.

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## THE IMPORTANCE OF FLEXIBILITY IN THE FUNCTIONING OF ENTERPRISES IN THE CONSTRUCTION INDUSTRY<sup>1</sup>

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### **ABSTRACT**

*The requirements of contemporary market and the dynamic environment exert pressure on the organizations to continually monitor the changes, to have the flexibility of operation and a rapid response to the signals appearing in the company's internal and external environment. As a consequence, flexibility or adaptability has become an indispensable part of running a business. Flexibility of an organization is one of the main challenges of modern management. This issue has been widely described in the sphere of theory. Generally, flexibility is defined as the ability to adapt to a changing environment without losing the organization's identity (Regev, Wegmann, 2011, pp. 91-98). However, it should be noted that the term "flexibility" is often used to describe concepts of a different meaning, so its essence is not always clear (Soffer, 2005, p. 35). Many contemporary concepts of management emphasize the fact that rapid response to ambient signals is one of the key success factors in the market. The issue of business flexibility and the factors affecting them may relate to different areas of the organization's functioning: production processes, human resources, products in offer, size of operations etc. The purpose of this article is to present flexibility as a factor influencing the competitive advantage of a construction company. The paper was based on the analysis of secondary sources: literature, reports, analysis, statistical data and analysis of author's own empirical research – a case study of a construction company. The article presents the essence and dimensions of flexibility of an organization, some factors affecting flexibility and variability of prosperity in the construction industry that determines the adaptation of an enterprises to its environment.*

**Keywords:** *competitive advantage, construction enterprise, construction industry, flexibility*

### **1. INTRODUCTION**

Flexibility of an enterprise is a concept that draws attention in the world of science and technology today. This is due to the turbulence of the environment in which all entities operate. This variability is reflected both in the dimensions of the general business environment as well as in the functioning and activities undertaken by entities in the target environment. Also, the inner processes of a company induce a growing demand for its ability to change. Flexibility is related to the market power of a business enterprise. On the other hand, it should be noted that flexibility of an enterprise is difficult to capture unambiguously. This is due to a number of factors, including the multidimensional nature of the phenomenon, the intertwining of causes and effects, and the functioning of flexibility at several levels of reference (for example total flexibility – partial flexibility) (Osbert-Pociecha, Moroz, Lichtarski, 2008, p. 59). The aim of the article is to analyze flexibility as a factor determining the functioning and development of enterprises in the market. The article presents the theoretical aspect of the concept of "flexibility", which deals with the essence and the dimensions of flexibility. In addition, it includes the results of statistical data that show a considerable variability in the construction industry, which determines the flexibility of its entities. An analysis of secondary sources was supported by conclusions from author's own empirical studies – a case study of a construction company.

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<sup>1</sup> The study has been implemented from the resources of the MB/WZ/2/2017 work financed by the Ministry of Science and Higher Education of Poland.

The conclusions of the analysis may be voiced in the discussion and constitute the basis for further research by the author on the importance of flexibility for construction companies.

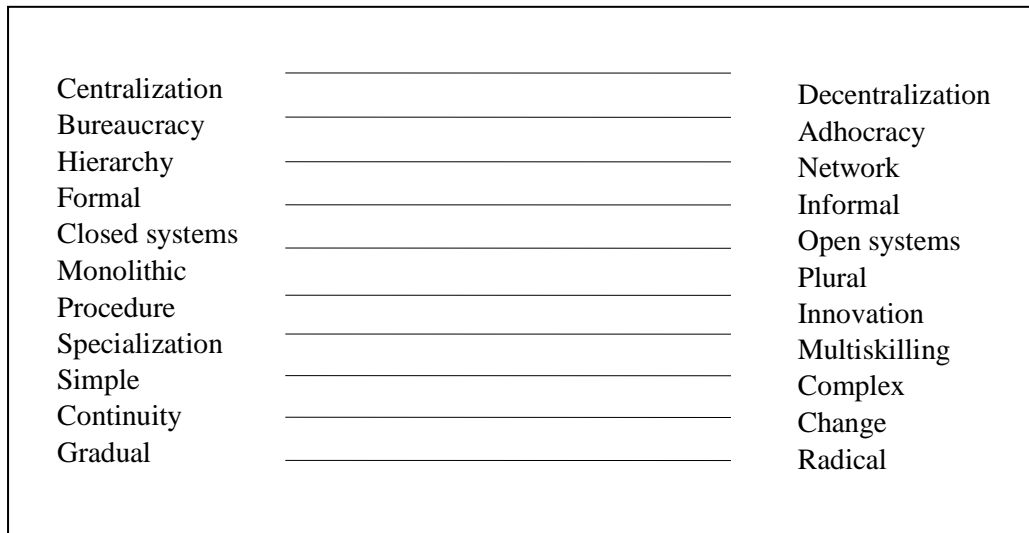
## 2. BASIC CATEGORIES – SIGNIFICANCE AND DIMENSIONS OF FLEXIBILITY

Flexibility is defined as the ability of a subject to make changes at the right time in an active or passive way through its components, as well as its relationships with the environment (Conboy, Fitzgerald, 2004, pp. 37-44). "Flexibility is a function of the interaction of two sets of variables. In terms of management and organization, flexibility is a function of the control capability of the management and the changeability of the organization" (Volberda, 1997, p. 170). Yet, the flexibility of a company means "creating options at various levels in the enterprise, developing ways and means of change across the range of options, and providing freedom of choice to various actors in the enterprise to make this change happen with minimum time and efforts" (Sushil, Stohr, 2014, p. 6). There are many definitions of flexibility in the relevant literature, some of which are presented in Table 1.

*Table 1: Examples of definitions and types of flexibility  
 (Krupski, 2005, p. 25 for Volberda, 1998, p. 84; Fellner, 2010, pp. 38-40)*

Author	Definition of flexibility	Characteristics and types of flexibility
D.J. Eppink (1978)	A characteristic of an organization that makes it less vulnerable for or puts it in a better position to respond successfully to unforeseen environmental change.	<ul style="list-style-type: none"> <li>– operational flexibility,</li> <li>– competitive flexibility,</li> <li>– strategic flexibility.</li> </ul>
M.G. Krijnen (1979)	Flexibility is considered to be a separate basic goal next to rentability and independence in turbulent environments.	<ul style="list-style-type: none"> <li>– operational flexibility,</li> <li>– organizational flexibility,</li> <li>– structural flexibility.</li> </ul>
P.A. Aaker, B. Mascarenhas (1984)	The ability of an organization to adapt to substantial, uncertain and fast occurring (relative to the required action time) environmental changes, which have a meaningful impact on that organization's performance.	Flexibility can be achieved, inter alia. by: <ul style="list-style-type: none"> <li>– diversification,</li> <li>– investment in resources,</li> <li>– specification limitation.</li> </ul>
R. Sanchez (1995; 2004)	The condition of an organization of having strategic options that are created through the combined effects of an organization's coordination flexibility in acquiring and using flexible resources.	<ul style="list-style-type: none"> <li>– coordination flexibility and resource flexibility,</li> <li>– five types of competences reflecting specific forms of flexibility.</li> </ul>
H.W. Volberda (1996/1998)	Strategic flexibility is the combined result of the responsiveness of an organization and the controlling capacity of its management.	<ul style="list-style-type: none"> <li>– steady-, state-, operational-, structural-, and strategic flexibility,</li> <li>– responsiveness of technology, structure, and cultur.</li> </ul>
S. Nadkarni, V.K. Narayanan (2007)	Strategic flexibility is the ability to precipitate intentional changes and adapt to environmental changes through continuous changes in current strategic actions, asset deployment and investment strategies. Organizations realize strategic flexibility through their strategic actions and flexible firms exhibit both diversity in strategic responses and rapid shifts from one strategy to another.	<ul style="list-style-type: none"> <li>– strategic flexibility.</li> </ul>

By analyzing the above definitions, it should be noted that many of them emphasize the ability of organizations to respond to changes in their environment. According to D. Faulkner and A. Campbell (2003, p. 237), "change in the environment obviously challenges the flexibility of a firm and its ability to adapt its strategy in response to changes in the environment". One other point to agree on is J.L. Price's, according to whom adaptiveness of an enterprise means the degree of ease of reaction to change (Ziębicki, 2010, p. 389 for Lawless, 1972, pp. 388-389). Such understanding of flexibility indicates that it is a gradual feature. Figure 1 presents selected sequences of flexibility of an enterprise.



*Figure 1: Selected strings of flexibility of an enterprise  
 (Sushil, Stohr, 2014, p. 6)*

In the opinion of J. Brillman (2002, p. 391), the following characteristics can be attributed to create an ideal flexible organization:

- the ability to keep up with changes in the environment and develop faster than competitors;
- effective customer feedback system and rapid response to their expectations;
- short decision-making processes – flat structure, empowerment of employees;
- staff accustomed to change (this feature is the most difficult to implement).

Still, flexibility is not an end in itself, it serves primarily to improve the competitiveness and effectiveness of a company. Contemporary operating conditions require quality and responsiveness to the changing market needs, which in turn requires organizational flexibility (McCutcheon, Raturi, Meredith, 1994, pp. 89-99). The literature of the subject emphasizes the need to integrate the flexibility of key resources (input data). Although the exact type and set of input data may vary depending on the industry in which the organization operates, it is possible to identify an overall set of four categories. These are: flexible technologies, flexible people, flexible structure and flexible systems and processes. The result is the desired outputs in the areas of product/ market, supply chain and efficiency. It is schematically shown the model in Figure 2 (Ahmed, Hardaker, Carpenter, 1996, p. 564).

*Figure following on the next page*

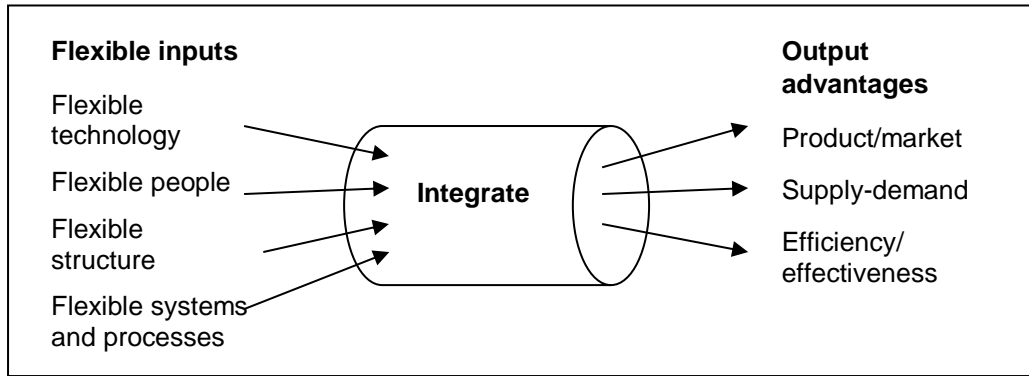


Figure 2: Model of integration of partial flexibilities into components of competitive advantage (Ahmed, Hardaker, Carpenter, 1996, p. 564)

### 2.1. Dimensions of flexibility

The concept of "dimensions of flexibility" is based on the work of J.S. Evans (1991, pp. 69-89), who defined flexibility in two dimensions: purpose and time. W. Golden and P. Powell (2000, pp. 376-379) expanded the framework by identifying the four dimensions of flexibility dominating in the relevant literature (Table 2).

Table 2: Dimensions of flexibility (Golden, Powell, 2000, p. 376)

Dimension of Flexibility	Scope
Temporal	Short term – Medium term – Long term
Range	Foreseen circumstances – Unforeseen circumstances
Intention	Offensive – Defensive
Focus	Internal – External

The temporal dimension indicates how long it takes for an organization to adapt. The second dimension – range, is the number of open options for an organization for predicted changes and the number of options available in response to unpredictable changes. The third dimension is an intention that answers the question whether an organization is proactive or reactive. The last dimension of flexibility is concentration that indicates in particular whether flexibility is obtained for an organization internally or by managing external relationships with trading partners (Golden, Powell, 2000, p. 376). Also, S. Kasiewicz (2009, p. 27) by defining the term "flexibility", points to its dimensions and scope. It specifies that flexibility is the response of an enterprise to continuous, incidental, or periodic environmental changes. Flexibility has three main dimensions:

- time of reaction,
- range (depth) of reaction and
- cost of adjustment.

The scope of the concept of flexibility can be limited to a narrower definition of the environment, e.g. the market itself or only to changes in demand, or to a narrower scope of business response by being limited only to an operational function (production or service) or type of resources, e.g. human resources, material, non-material".

### 3. VARIABILITY AS DETERMINANTS OF FLEXIBILITY IN THE CONSTRUCTION INDUSTRY

The importance of flexibility of an organization is directly related to the type of business. The construction industry is characterized by significant volatility, as shown in Figure 3.

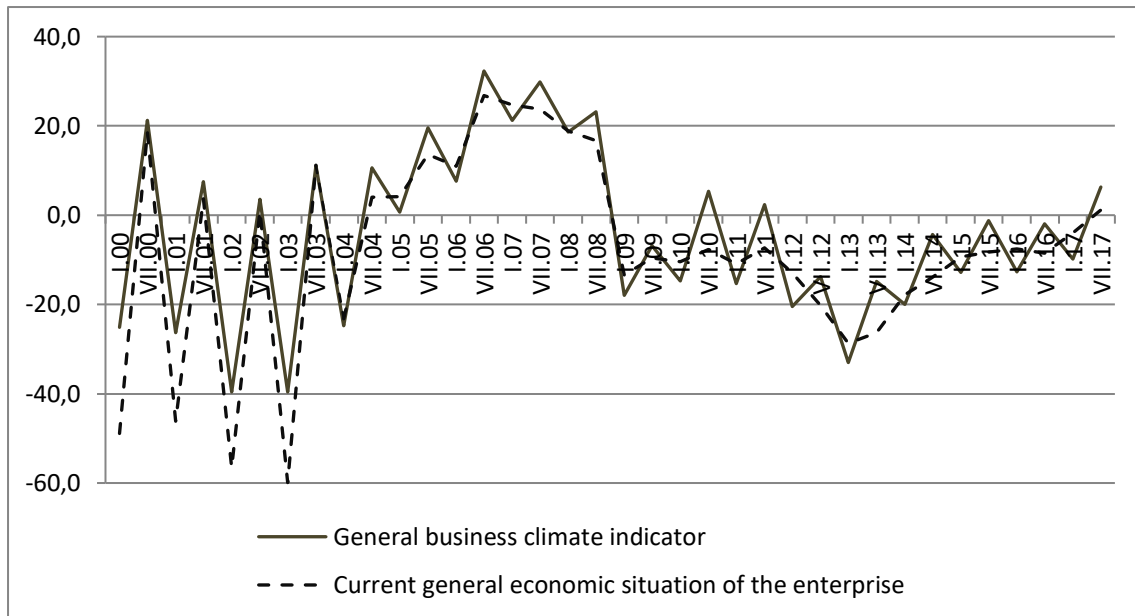


Figure 3: Business tendency survey in construction  
(own study based on Central Statistical Office of Poland, 2017)

In addition, construction output is characterized by seasonality, which is also reflected in the data presented in the chart, which takes into account information from the years 2000-2017 included in the half-yearly scale (January, July). Significant fluctuations in the annual economic situation, and what is also related to them, fluctuations in revenues, results and liquidity of companies in the industry are influenced both naturally by weather conditions hindering a series of external work, the construction work cycle, but also the practice of ordering - clearing orders usually until the end of the calendar year (Wojtkowiak, 2015, p. 323). However, it should be noted that in the period from 2014 these factors significantly lessen their impact on the construction industry. The data presented in Figure 3 also shows that the current overall economic situation of a construction company is to a large extent an indicator of the general economic climate. Figure 4 shows some selected barriers in the construction industry, changing with the changing economic climate.

Figure following on the next page

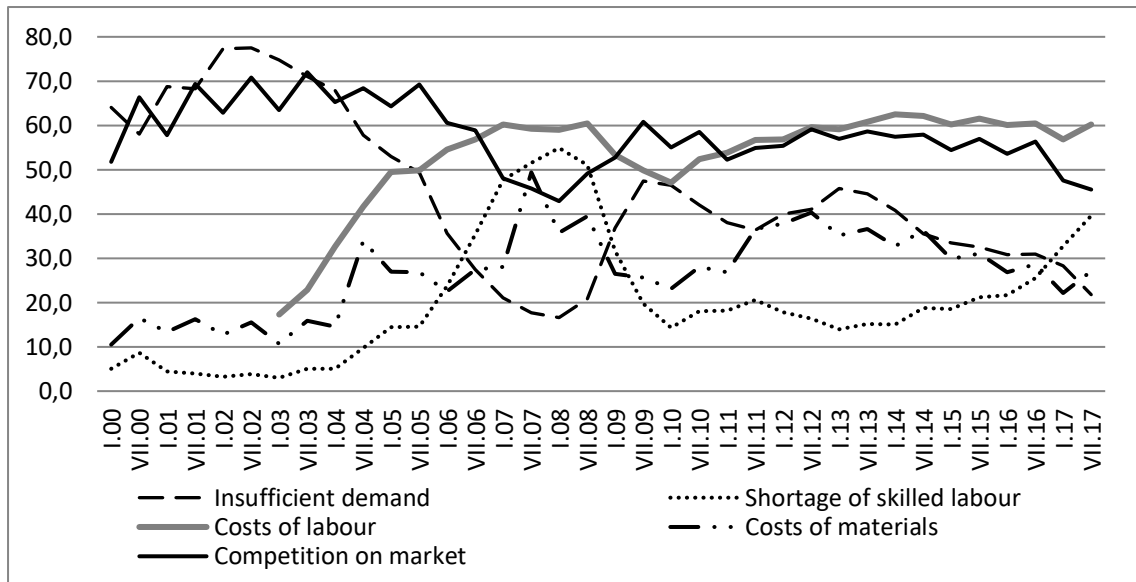


Figure 4: Factors limiting construction industry activity  
 (own study based on Central Statistical Office of Poland, 2017)

The presented data point to the significant increase of employment costs during the analyzed period. The shortage of skilled workers has also been a significant barrier in recent years. Competition in the market is a high level as a barrier for doing business. The cost of construction materials is significantly lower. There is also a low percentage of indications of insufficient demand. The presented barriers are related to industry risk, long cycle of production, significant costs of construction investments and relatively low barriers of entry. Although construction generates a relatively small share of GDP, it should be noted that in construction there is a so-called multiplier effect. This feedback phenomenon means that 100 people directly employed in construction create at least 200 additional jobs (and initiate production) in other sectors (Prośniewska, Gołębiowski, Gajdos, 2012, p. 15). Hence the importance of the analyzed industry.

#### 4. CASE STUDY RESEARCH

##### 4.1. Method

For the purpose of practical analysis and evaluation of the importance of flexibility for the functioning of a construction company, the company "AKS-BUD" Kamil Sarosiek Roadworks Company was surveyed. The study was conducted in November 2017 using the method of a direct interview. The "AKS-BUD" Kamil Sarosiek Roadworks Company was registered in May 2009 in Białystok (Poland). The entity provides comprehensive construction services in Podlaskie Voivodship and neighboring regions in the field of investment services, road infrastructure and civil engineering. The scope of business activity includes:

- construction and repair of surfaces: urban roads, expressways and highways, maneuvering yards, car parks, pavements;
- small architecture;
- earth works;
- local transport and services using construction machinery;
- construction and reclamation of landfills;
- external sanitation works;
- demolition;
- snow removal.



The company has experience in executing, among others, orders and services for city authorities, the General Director for National Roads and Motorways, Border Guard, Military Units, Police, municipalities, County Roads Administration, Municipal Property Management, Housing Communities and individual clients (AKS-BUD, 2017). The choice of the subject was dictated by a considerable diversification of the range of services provided, the technological flexibility and the variability of labor resources (employing qualified staff but also cooperation with subcontractors).

#### 4.2. Results and Analysis

The first question asked in the survey was about the role of flexibility in the functioning of construction companies in the opinion of the respondents. The representatives of the company indicated that, in their opinion, flexibility in the construction industry is very important due to the changing environment and the variability of the emerging investments. Quite often, those companies that focus on one type of work cannot cope when the market demand for a service is declining. In turn, flexibility and adaptability to customer requirements offers the opportunity to grow and stay on the market. Next, the representatives participating in the interview were asked to answer the question of how much flexibility contributes to building a competitive advantage for construction companies. They assessed that there is a direct correlation between flexibility and competitiveness, meaning that the higher the flexibility, the greater the competitive advantage. However, the respondents stressed that it is important to remember the professional performance of work that is important in this industry. With each construction and commission being different, flexibility of the employees and the enterprise allow a company to gain experience. As the main determinant of flexibility of construction companies, the representatives of the "AKS-BUD" Roadworks Company pointed to the interdependence of companies, which on one hand compete with the attractiveness of their offers at the stage of winning contracts and then co-operate on a subcontracting basis at the stage of contract execution. The respondents also defined their actions to make the company more flexible (Table 3).

*Table 3: Activities to make the functioning of a company flexible in the „AKS-BUD” Kamil Sarosiek Roadworks Company (study based on the research)*

Area	Media of flexibility
Personal	– ability to take risks, – willingness to learn
Technological / material	– state of technical equipment.
Product	– scope and quality of guarantees, – negotiating offers.
Market / relations	– partnership relations with subcontractors.
Human resources and organizational	– skills of employees, – interaction with many entities

In addition to the advantages of flexibility, the respondents also noted certain limitations (danger) for the flexible functioning of a construction company. They indicated that a roadworks company, as a result of too much flexibility, could lose its original structure and scope of professional action for a variety of offerings and extensive cooperation with subcontractors. This may result in an unreliable execution of orders due to a lack of control over many subcontractors.

## 5. CONCLUSION

The presented results of research on flexibility are the beginning of the author's research in this area. Flexibility is one of the key challenges for modern businesses. Although this issue has been described quite broadly, there is often a lack of systematization of the problem in question. This may therefore be the basis for further analysis. What remains to be developed is flexibility (e.g. determinants, measures) from the perspective of a specific industry – construction, and in the further perspective of the industry: engineering, residential and non-residential construction. Undoubtedly, as demonstrated by the analysis, the construction industry is characterized by certain characteristics resulting from the fact that the companies operate on the basis of cross-compliance, on one hand they compete with the attractiveness of the offer at the stage of winning contracts and then cooperate on a subcontracting basis at the stage of performance of contracts. This is, according to the author, one of the prerequisites for deliberate implementation of flexibility in construction companies.

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## ELEMENTS OF EFFECTUATION IN BUSINESS MODEL DEVELOPMENT

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### ABSTRACT

*Effectuation is defined as a decision-making logic that entrepreneurs employ in situations of uncertainty. It is rooted in entrepreneurs' expertise and implies a set of principles that guide decision-making processes to be control-oriented as opposed to prediction-oriented. The underlying logic of strategic decision-making is influenced by various forms of uncertainty that entrepreneurs operate within in the process of business model development. The assumption is that the decision-making logic changes as the level or form of uncertainty changes. The main objective of this article is to analyze the degree to which entrepreneurs tend to apply each of the effectuation principles in developing a particular component of the business model. The study is qualitative in nature and it focuses on six case studies depicting micro and small companies operating in two creative industries sectors in Croatia. The data collection included semi-structured, in-depth interviews complemented with a survey and general business information about the companies. The empirical analysis juxtaposes business models of six companies in light of different forms of uncertainty each company operates within, idiosyncrasies of each business model and specific elements of effectuation that entrepreneurs/business owners have embodied into segments of the business model. The results pinpoint the components of the business model that are predominantly shaped by effectual logic in each of the case studies. The paper contributes to the advancement of empirical evidence in research studies connecting business model framework and theory of effectuation, and deepens the understanding of business model development of micro businesses operating in creative industries.*

**Keywords:** *business model, creative industries, effectuation, growth, uncertainty*

### 1. INTRODUCTION

Based on the seminal work of Saras Sarasvathy (2001; 2009), it has been postulated that entrepreneurs' perception of risk or uncertainty is different from non-entrepreneurs' perception in a way that entrepreneurs draw specific cognitive problem spaces when searching for a solution to a particular business situation. The logic they apply in their decision-making process is different, sometimes even opposite, from the logic of managers and bankers (Sarasvathy, 2001). The set of principles they follow in building their ventures is known as effectual logic which is, theoretically, positioned as an antipode to causal logic. In that sense, the effectual approach starts with means and resources and focuses on selecting between possible effects that can be created with the given set of means, while causal approach assumes a particular effect to be given and focuses on selecting between means to create that effect (Sarasvathy, 2001). The main notion is that an individual faced with risk and relatively predictable future will be more likely to apply causal reasoning in making business decisions, while an individual facing high uncertainty and unpredictable future will be more effectual in their decisions.

This study focuses on the application of effectual logic in the process of business model development. The underlying assumption is that entrepreneurs operate in an uncertain or even highly uncertain environment and that induces the application of effectual logic in strategic decisions and business model development. In that regard, the study aims to answer the question: "What key components of a business model are shaped by predominantly effectual logic?" To answer this question, the study provides a detailed analysis of six small and micro companies/business models in the creative industries. The selected business models are classified along nine main business model dimensions (Osterwalder and Pigneur, 2010) and compared to each other. Then, the coding scheme was applied to identify decision and actions that are predominantly effectual or causal. Finally, business model components that are under a strong influence of effectual logic are identified.

## **2. THEORETICAL FRAMEWORK**

### **2.1. Business models studies within creative industries**

This study attempts to identify elements of effectual reasoning in the process of making decisions related to key business model components. Although both research fields – effectuation and business model development – are quite vibrant and in focus of many entrepreneurship researchers, the relationship between decision-making logics and business model development has been largely under-explored (Reymen et al., 2017). Furthermore, the process of business model development implies uncertainty in conceptualization and implementation phase (Sosna et al., 2010), and as such serves as a fertile ground for exploring effectual decision-making. Previous research on business models have been fragmented, largely developed in silos and tailored to specific interest of respective researchers (Sosna et al., 2010). Scholars are yet to agree upon a unique definition and structure of a business model (Zott et al., 2011). According to Osterwalder and Pigneur (2010), business model describes the rationale of how an organization creates, delivers and captures value. It can serve as a conceptual tool "that enables entrepreneurial managers to design their new, innovative future business model, as well as to help managers to improve their current design" (Zott and Amit, 2010: 217). As such, it reflects the sources of company's competitive advantage by identifying "the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit" (Teece, 2010). In line with nuances of business model definitions, the authors have offered various combinations of business model components. Morris (2005) attempted to reconcile previous ten years of business model studies by offering a standard framework for characterizing a business model, which included factors related to offering, market factors, internal capability factors, competitive strategy factors, economic factors and growth factors. An extended version and probably the most commonly used one, was proposed by Osterwalder and Pigneur (2010) and comprised of nine components: value proposition, customer relationship, customer segment, distribution channel, key activities, key resources, partner network, cost structure and revenue flows. Previous research on business models in creative industries have only recently picked up pace and identified specific paths that prospective studies should focus on. Svejenova et al. (2010) pursued a qualitative, single-case, longitudinal research within the restaurant industry to increase the understanding of an individual business model, its evolution and changes. Coblenz et al. (2014) focused on industrialization processes of an arts museum and its struggle to balance its business model between the two most crucial components: value creation and value capture. Furthermore, Moyon and Lecocq (2014) explored the case of French record industry to provide insights into value creation mechanisms that take place at an inter-industrial level of analysis.

Another study of business model within creative industries identified three classes of online business models within music, video, film, book, image and publishing sectors industries (Lyubareva et al., 2015).

## 2.2. Business models through the lenses of effectuation

Companies develop their business models under conditions of market and technological uncertainty (Andries et al., 2013). The more stakeholders and decision-makers are present in the industry, and the earlier the stage of industry development (Dutta and Crossan, 2005), the less predictability can be found in the process of building a business model. A growing body of research focuses on decision-making logic under uncertainty and some new theoretical concepts have emerged providing adequate frameworks for exploring entrepreneurs' decisions and behaviors (Fisher, 2012). One of those concepts is effectuation (Sarasvathy, 2009) with its fundamental notion that in times of high uncertainty, an entrepreneur is not inclined to focus on goals and predictions (as they may be unreliable or too hard to reach), but he or she immerses themselves in strengthening and expanding the pool of resources they have at hand to create a partnership and further (re)shape their business model (for more information on the process of effectuation, see Figure 1.).

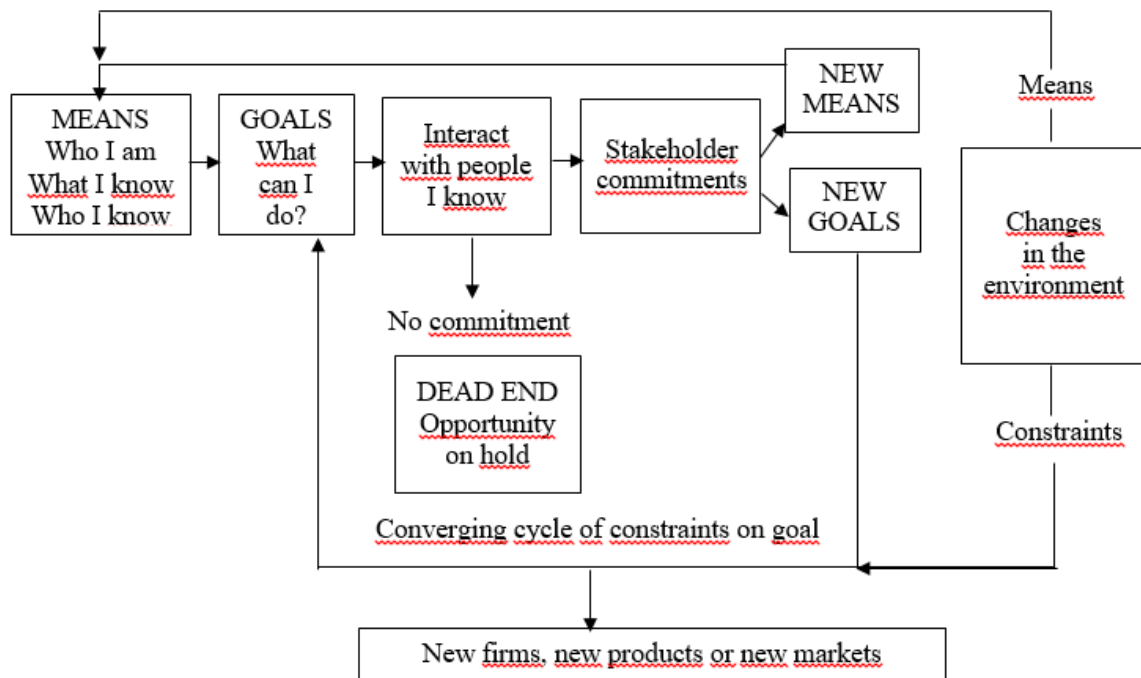


Figure 1: The effectuation process (Dew and Sarasvathy, 2005, p. 16)

Chesbrough's (2010) work was one of the early attempts to make a link between business models and effectuation. The author argues that constructing a map of business model components can serve as a source of experiments considering alternate combinations of processes and activities that may eventually lead to innovative business models. In that sense, effectuation encourages an entrepreneur to focus on actions that create new information about latent market possibilities as opposed to studying the market to predict the future and set strategic goals. Among only few empirical studies connecting business models to effectuation, the evidence they provide did confirm certain notions. First, effectual approach in business model development is suitable to positively enhance business model innovation (Futtere et al., 2017; Reyman et al., 2017).

More specifically, a positive and significant relationship between the presence of entrepreneurs who apply effectual logic and the degree of business model innovation was found in a study by Velu and Jacob (2016).

### 3. METHODOLOGY

This study adopted a qualitative research strategy of multi-case studies as the most suitable for theory development (Eisenhardt and Graebner, 2007) in the context of bridging two theoretical fields – business models and effectuation.

#### 3.1. Sample and data collection

In accordance with the nature and the goal of this study, theoretical sampling was adopted as the most appropriate method of case selection. According to Eisenhardt and Graebner (2007), studies focused on theory testing should incorporate representative samples (random or stratified sampling) that will enable generalization of the results. However, when the purpose of the study is to develop a theory, the most appropriate approach involves selecting cases that are particularly suitable for illuminating and extending relationships and logic among constructs. In line with the aforementioned reasoning, this study focuses on the following sectors of creative industries: web design and consulting, advertising, architecture and interior design. All of these sectors face high levels of uncertainty derived from various sources. Small and micro companies operating in the web design and advertising sectors are under the influence of fast-changing fields of technology and digitization. Furthermore, some of the companies have strong export orientation (web design and consulting) or are in the early phase of the industry life-cycle, and the market for their services is still developing (interior design). Finally, all pre-selected sectors are characterized by predominance of micro companies, direct interaction with users' demands, explicit profit orientation, and are inclined to experiment with new and innovative business models. Basic information about the companies included in the study is provided in Table 1.

*Table 1: Sample of micro and small businesses from the creative sector  
 (Source: www.poslovna.hr and transcripts of interviews)*

Case	Industry	Years in Operation	No. of employees (in 2016)	Revenues in 2016 (HRK)	Entrepreneur's educational background	Age of Ent.
A	Web design and advertising	15	9	6,876,000	Master degree in business	38
B	Web design and consulting	9	39	12,461,300	Master degree in business	38
C	Advertising	25	1	319,800	LL.B	59
D	Architecture and interior design	10	7	1,524,600	MA in architecture	39
E	Architecture and interior design	9	4	1,098,600	MA in architecture	36
F	Interior design	6	1	209,600	MA in interior design	41

The analysis is based on rich empirical data derived from a variety of sources: semi-structured interviews with founders and members of company management teams, survey, annual reports, and business database Poslovna Hrvatska (poslovna.hr).

### 3.2. Data analysis

The first step of the analysis was profiling the companies' business models along the spectrum of nine main business model components according to Osterwalder and Pigneur (2010) and Morris et al. (2005). The goal of this step was to identify similarities and differences between business model components across all six cases and compare the results to industry affiliation. The second step included coding particular decisions or actions as effectual or causal. The coding scheme was adapted according to Reymen et al. (2015). The last step involved identifying the components of business models that are characterized by a strong presence of effectual logic.

### 4. COMPARATIVE ANALYSIS OF BUSINESS MODELS

Six companies included in the empirical analysis belong to the web design and advertising industry (cases A, B and C) and the architecture and interior design sector (cases D, E and F). In the context of their business models' structure, affiliation to creative industries is visible in the fact that they rely heavily on intellectual capital as a key resource needed to develop and offer the value proposition, have personalized or semi-personalized relationships with their customers, and in most cases provide customized solutions/services delivered through direct sales channels. Besides, the cost of time spent on developing creative solutions dominates their cost structures. On the other hand, points of distinctions are primarily related to the geographical area capturing target customer segments, the nature of key activities needed to deliver the service, as well as the types of partnerships they have developed with people and businesses. Finally, they also differ in the context of their revenue streams. Since all the protagonists are part of the same regulatory system, most of the changes in their business models were triggered by macroeconomic trends related to low overall liquidity, decreased number of clients (in the B2B segment) or increased costs for the micro and small businesses.

*Table2: Comparison of the key components of business models*

*(Source: Based on the analysis of transcripts of interviews) – Table ends on the next page*

<b>BM dimen-sions</b>	<b>Case A</b>	<b>Case B</b>	<b>Case C</b>	<b>Case D</b>	<b>Case E</b>	<b>Case F</b>
<b>VP</b>	Semi-customized	Customized	Professional	Fully customized	Fully customized	Customized
<b>TC</b>	National and international customers	International customers	National	National and international customers	Regional	National
<b>CH</b>	Partners and intermediary	Direct sale channel	Direct sale channel	Direct sale channel	Direct sale channel	Direct sale channel
<b>CR</b>	Semi-personalized	Personalized	Personalized	Personalized	Personalized	Distinctively personalized
<b>KA</b>	Few distinctive activities	Integrate broad scope of distinctive activities	Distinctive activity in narrow domain	Integrate broad scope of distinctive activities	Integrate broad scope of distinctive activities	Distinctive activity in narrow domain
<b>KR</b>	Organizational	Intellectual	Intellectual	Intellectual	Intellectual	Intellectual
<b>KP</b>	Formalized and unformalized agreements	Formalized and unformalized agreements	Long-term partners	Formalized and unformalized agreements	Long-term partners	Occasional subcontractors
<b>CS</b>	Economies of scope	'Creative design process' and value driven	'Creative design process' and value driven	'Creative design process' and value driven	'Creative design process' and value driven	'Creative design process' and value driven



<b>RS</b>	Transactional service sale + fee, in advance, premium access	Transactional service sale + after sale service or complementary products	Transactional service sale + "pay per use/renting"	Transactional service sale + third party supported (bonus, bartering)	Transactional service sale + third party supported (bonus, bartering)	Transactional service sale + "pay per use/renting"
VP-Value Propositions, TC-Target Customer Segments, CH-Channels, CR-Customer Relationships, KA-Key Activities, KR-Key Resources, KP-Key Partnerships, CS-Cost Structure, RS-Revenue Streams						

## 5. BUSINESS MODEL COMPONENTS THROUGH THE LENS OF EFFECTUATION

All the protagonists from the cases have exhibit some elements of effectual behavior in the process of developing their business models. In an uncertain environment characterized with negative macroeconomic trends (low overall liquidity levels, decreasing number of businesses and educated people emigrating to foreign countries), entrepreneurs are inclined to experiment with their business models to remain successful without losing control over the company. In the processes of changing and adapting their business models to changes in the environment, they rely on effectual logic. This is particularly visible in their tendency to form partnerships with various stakeholders. The entrepreneur from the case B has a wide informal network of referral companies that works two ways – to fill temporary idle capacity or to create additional stream of revenues by charging commission for a referral. Furthermore, company from the case A maintains a close relationship with the university to make sure that future business graduates have adequate knowledge or at least basic understanding of the kind of services they provide. Through this partnership, the company expands its pool of potential employees and educates prospective clients about the role of online advertising and web analytics. Another approach that was common among protagonists relates to affordable loss approach or a tendency to invest limited amounts of money and resources to make sure that even in the worst-case scenario, the company stays in business. Besides, in time of high uncertainty, entrepreneurs may perceive traditional market techniques, such as market research, to be untrustworthy and therefore prefer to base their decisions on means at hand as opposed to predictions. Table 3 describes examples of effectual decisions related to business model development.

*Table3: Examples of effectual decisions and behaviors is business model development  
 (Source: Based on the analysis of transcripts of interviews) – Table ends on the next page*

<b>Effectual decision / action</b>	<b>BM component addressed with the decision / action</b>	<b>Example</b>
Building on a referral network to create opportunities and additional revenue streams.	Key partnerships / Revenue streams	Case B: Partnering with local and international companies that provide same service to create an informal referral network that enables them to eliminate the idle time or to create additional revenue streams (when operating at full capacity)
Partnering with university / cocreation of the new study program.	Key partnerships / Key resources	Case A: The company has collaborated with the university in creating (and providing teaching services for) new undergraduate courses in web design and analytics to expand the pool of prospective employees and increase the understanding of type of services they offer.
Taking control over the industry development and growth locally.	Key partnerships	Case B: Launching non-profit organisation in partnership with two other IT companies in the city to boost the attractiveness of software development as a career choice and increase the competitiveness of local IT companies.
Opposing traditional market research and relying on network of stakeholders to create new opportunities.	Key partnerships	Case E: The entrepreneur does not trust/rely on traditional market segmentation and market research techniques but is actively expanding the existing network of contacts to create new opportunities.

Reducing the uncertainty (and maintaining control) by investing only what they can afford to lose.	Cost structure	Case D: From the very start of the venture, four owners prefer changes and adaptations in business model (to account for temporary lack of financial resources for organic growth) to taking external financing from the bank or an investor.
Be willing to make personal sacrifices to keep the company going without losing control.	Key resources	Case C: In the 25 years of operation, the owner had purposely avoided many opportunities for fast growth if they meant losing substantial control over the company (such as providing exclusive services to a political party and taking on external financing)
Experimenting with value proposition to better suit prospective client needs.	Value proposition, revenue stream	Case F: To account for unawareness of prospective clients about the type and value of her services, the entrepreneur is experimenting with non-typical "pay per consultation" revenue stream.

## 6. CONCLUSION

The aim of the study was to identify and explore elements of effectual logic in the process of business model development. The empirical analysis focused on six companies from the creative industries in Croatia. The assumption was that effectuation, with its inherent action orientation and non-predictive logic, is a suitable framework for decision making under uncertainty. The findings show that all six entrepreneurs/protagonists of the cases exhibit some elements of effectual logic. Most of them used alliances and partnerships to gather additional resources and strengthen the components of business models related to value creation, value delivery and value capture. Acquiring heterogeneous resources and knowledge of third parties enabled them to refine the value proposition and reach new clients. Furthermore, the entrepreneurs were focused on keeping the control over the business and defining resources that are affordable to be lost for the company. By doing so, they managed to keep the company alive even in the hardest times. Another commonality was tendency to experiment with value proposition while keeping the unique organizational means as a starting point for each change or adaptation of the business model. Overall, the paper provides additional empirical evidence about the connection between decision-making logic and changes in the business model components among micro and small companies operating in the creative industries. Building a business model is a dynamic process that implies reframing of the business strategy and experimenting with business model components. In that sense, to capture the real essence of effectual approach to business model development, it is necessary to conduct a longitudinal study and future studies should focus on testing the theoretical framework on a larger sample and over longer period.

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## APPENDIX

### Description of the cases

Case A is a small business that offers digital-campaign management services, web analytics and web design services. They are building their competitive advantage on very specific expertise and complete transparency in every segment of their service. In line with that, continuous informal education of every employee is very important. Expansion of the pool of knowledge inside the company created an opportunity to expand their services to providing educational programs in their field of expertise.

Case B is a small business focused on providing solutions for eCommerce businesses. They have a very strong orientation to international markets coupled with a desire to stay located in their hometown. Attracting new qualified employees in one of the biggest challenges they face, so few years ago they have launched a joint project - non-profit organization with a goal to promote careers in IT industry, especially software development segment.

Case C is an audio production and advertising agency that provides moderation services for various business or public events, as well as event management. It has been managed as a family business for more than two decades, and the entrepreneur strongly identifies himself with the company. In order to stay successful, he has significantly changed the business model several time and are still in the process of experimenting with value creation and value capturing concepts.

Case D is a growing micro business offering the full set of architectural services that can be bundled or unbundled. The company has been able to grow organically due to arrangements with a number of longstanding partners in the industry. In addition to key partnerships, the strength of their business models lies in highly creative and professional co-workers.

Case E is a micro business providing fully customized architectural services primarily to the local market. Due to a small market, the entrepreneur has been expanding types of services they offer which resulted in launching a separate spin-off business offering a complementary service (interior design, furniture design and production).

Case F is a self-employed interior designer in the process of building her own brand. Due to a focus on a relatively small local and regional market, and unawareness of prospective clients of the type and value of her services, she is inclined to experimentation with her business model to find innovative ways of value creation and value capturing.

## THE CONCEPT OF SOCIAL RESPONSIBILITY OF BUSINESS AS SEEN BY EMPLOYEES

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### **ABSTRACT**

*Employees are a key group of stakeholders in companies implementing corporate social responsibility. There exist strong dependencies and mutual interactions between the organisation and its employees, which can contribute to the success or failure of the company. Due to the strategic role played by the employees, the social responsibility of business should above all be focused on the securing of the interests, needs and expectations of this group of stakeholders. Based on the analysed literature it can be stated, however, that this group of stakeholders is still not the main focus of interest among the companies implementing CSR. The aim of this article is to collect opinions of the employees regarding their view on the CSR activities in their companies. The article presents results of surveys conducted among the employees of three Polish companies which implemented CSR.*

**Keywords:** *corporate social responsibility, CSR participation, employee*

### **1. INTRODUCTION**

The theory of stakeholders plays an important role in the concept of social responsibility of companies. The stakeholders actively take part in the life of every company and they are the subject of this concept (B. Klimczak, 2006, pp. 74-75). Activities realised under the CSR concept generate the most positive reactions when they cause the stakeholders to identify themselves with the company. It is best if the undertaken actions lead to the satisfaction of higher needs felt by the stakeholders, as it makes it easier for them to identify themselves with the company (D. Hildebrand, S. Sen, C.B. Bhattacharya, 2011). According to the theory of stakeholders, the relations with the stakeholders are a key factor influencing the success of a company. Only stakeholders who are satisfied, feel individual benefits and are willing to cooperate, can ensure the survival of a company in today's market. The better the relations between the company and its stakeholders, the stronger its position in the market (A. Lulewicz-Sas, 2016). The majority of research into the effects of CSR implementation focuses on external stakeholders, mainly consumers. It is very rare to include internal stakeholders - employees, into the analysis (Collier, J.; Esteban, R., 2007; Kaler, J., 2009). The attitudes, behaviours and feelings of employees are a crucial and at the same time insufficiently analysed element of CSR (Aguinis, Glavas, 2012). The aim of this article is to collect opinions of employees regarding their perception of the implementation of the CSR activities by their companies. The article presents the results of surveys conducted among the employees of three Polish companies.

### **2. EMPLOYEE PERCEPTION OF CSR ACTIVITIES**

The employees constitute the most important resource of the company and they are its integral part. There are strong dependencies and mutual interactions between the company and its employees. The employees can commit to the success of the company but also to its failure (M.T. Azim, 2016). The employees are a key stakeholder group in companies implementing CSR (M. Öberseder, B.B. Schlegelmilch, P.E. Murphy, 2013). The effectiveness of the employees' work as well as the atmosphere within the company and their organisational commitment, all depend on the satisfying of their needs and expectations. Employees not only expect a satisfying salary from their company, but also social security, a safe work environment, opportunities for development, equal treatment, as well as respect and recognition.

Research shows that the initiatives undertaken by the companies under CSR have a significant influence on the employees resulting in higher organisational commitment (Bramer et al., 2007). Strong organisational commitment results mainly in: (1) a full acceptance of the goals and organisational values, (2) a high willingness to maximise efforts for the good of the organisation, (3) a strong willingness to being a part of the organisation (A. Cohen, 2007). Involved and satisfied employees have feel a duty to reciprocate the positive behaviours they experience at the workplace (O. Farooq, M. Payaud, D. Merunka, P. Valette-Florence, 2014). There is a certain psychological bond that develops between the employee and the organisation, which translates into their attachment to the organisation, a strong commitment to the actions undertaken within the organisation and the satisfaction of being a member of the organisation. Organisational commitment results in measurable benefits. The conducted research shows that the efficiency of work is 18% higher, the customer loyalty is 12% higher and there are 62% less work-related injuries in companies with strong commitment in comparison to companies with weak commitment. Research shows that commitment also influences the lower fluctuation of employees. Engaged employees have an 87% lower tendency to leave their organisation (loss of an employee can cost the organisation even 213% of an employee's salary) (*The Business...*, 2014). Research conducted by Bashir et. al show that the CSR activities realised in organisations result in an increase of the employees' sense of belonging to the organisation and influences their job satisfaction, which improves efficiency (Rizwana Bashir, Atif Hassan, Farooq-E-Azam Cheema, 2012). Other research shows that the activities realised under CSR influence the level of trust in the organisation, which translates into the behaviours and attitudes of employees (Rupp et. al, 2006). The effects of realising CSR activities are visible as early as at the recruitment stage of new employees. Research shows that companies realising CSR activities are perceived as being more attractive and prestigious by persons looking for work, which is why they can attract the best employees (Turban, G.D., & Greening, D.,1996, D.W. Greening, D.B. Turban, 2000). The research described in literature shows that the organisation's culture influences the perception of the concept of CSR by the employees. Employees will engage in CSR activities to a larger extent and perceive them in a more positive way when the undertaken CSR initiatives are in line with the company's culture (Eun Mi Lee, Seong-Yeon Park, Hyun Jung Lee, 2013).

The conducted analysis of literature allows to state that there is a wide variety of factors influencing the perception of the CSR concept by the employees. In this research paper the following hypotheses shall be tested:

- 1st hypothesis: The higher the level of job satisfaction, the more positive the perception of CSR activities
- 2nd hypothesis: The higher the commitment of top management in CSR, the more positive the perception of CSR activities
- 3rd hypothesis: The more formalised the CSR concept, the more positive the perception of CSR activities

### **3. RESEARCH METHOD**

#### **3.1. Sample and data collection**

The survey analysis was conducted among employees of three Polish companies, which implement CSR activities. As a result of the conducted research, answers from 154 respondents were obtained. Table 1 shows the characteristics of the research sample.

*Table following on the next page*

Table 1. Characteristics of the research sample (n=154) (Source: own work)

Variables		Number (%)
Gender	Male	61 (39.6%)
	Female	93 (60.4%)
Age	below 20	3 (1.9%)
	20-29	45 (29.2%)
	30-39	57 (37.0%)
	40-49	24 (15.6%)
	50-59	15 (9.8%)
	over 60	10 (6.5%)
Position	manager	23 (15.0%)
	specialist	55 (35.7%)
	manual labourer	51 (33.1%)
	office employee	25 (16.2%)
Seniority	up to 2 years	28 (18.2%)
	from 2 to 5 years	41 (26.6%)
	from 5 to 10 years	44 (28.6%)
	from 10 to 15 years	21 (13.6%)
	from 15 to 20 years	12 (7.8%)
	more than 20 years	8 (5.2%)

### 3.2. Measures

In order to conduct the research, a survey was created with 34 questions grouped into 8 categories (Appendix A).

The measurement scales were 7-point Likert-type scales ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

The conceptual model is presented in figure 1.

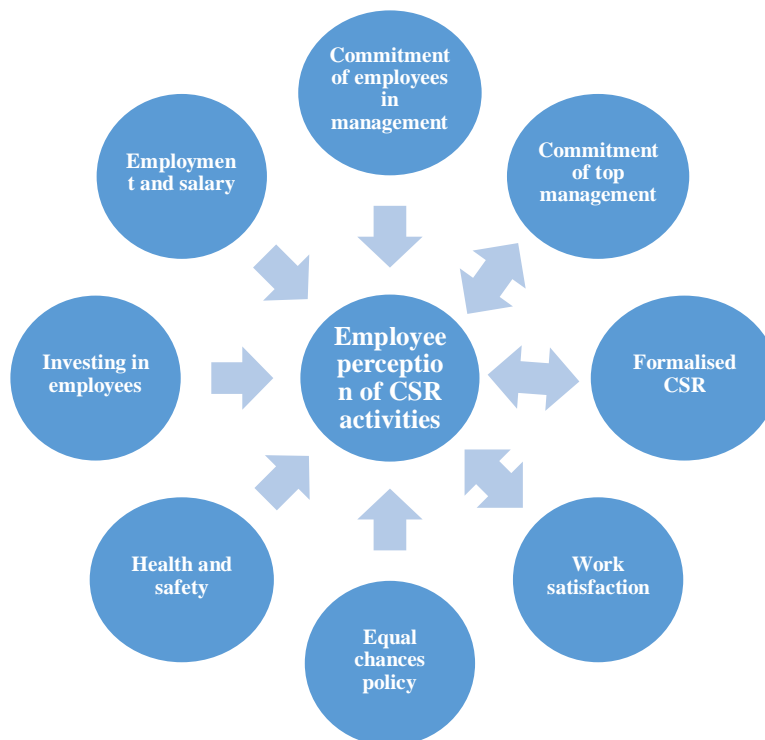


Figure 1. The conceptual model (Source: own work)

### 3.3. Hypotheses testing

The following research hypotheses were verified:

- *1st hypothesis: The higher the level of work satisfaction, the more positive the perception of CSR activities*
- *2nd hypothesis: The higher the level of commitment of top management in CSR activities, the more positive the perception of CSR activities*
- *3rd hypothesis: The more formalised the CSR concept, the more positive the perception of CSR activities*

In order to compare the assessments of individual categories, eight synthetic variables were created. The numeric values of these variables were created based on the average marks obtained for individual questions in each of the eight categories. Next a linear Pearson correlation coefficient was determined between the assessed categories, with a division into two groups of variables: the first group is connected to the perception of CSR activities (5 variables), the second one contains three variables relating to the verified research hypotheses, which are work satisfaction, commitment of top management in CSR and CSR formalisation. The results are shown in table 2.

*Table 2. Pearson correlation coefficient between the average marks in each category  
 (Source: own work)*

Variable	Correlations		
	Work satisfaction	Commitment of top management in CSR	CSR formalisation
Investing in employees	0.614721	0.773136	0.798829
Employment and salary	0.713289	0.845340	0.822776
Commitment of employees in management	0.749771	0.736355	0.666591
Health and safety	0.452041	0.773152	0.678087
Equal chances policy	0.745760	0.753873	0.762395

Based on the conducted analysis it can be stated that all the determined correlations are statistically significant with a probability lower than 0,05. Work satisfaction strongly influences activities such as: commitment of employees in management, equal chances policy and employment and salary. All activities related to CSR strongly correlate with the assessment of the commitment of top management in CSR. The assessment of activities related to employment and salary, investing in employees and equal chances policy strongly correlate with the assessment of the formalised CSR concept. The assessment of the influence of work satisfaction, commitment of top management and formalisation of CSR on the perception of CSR activities by employees was analysed, taking into account their position in the company (figure 2).



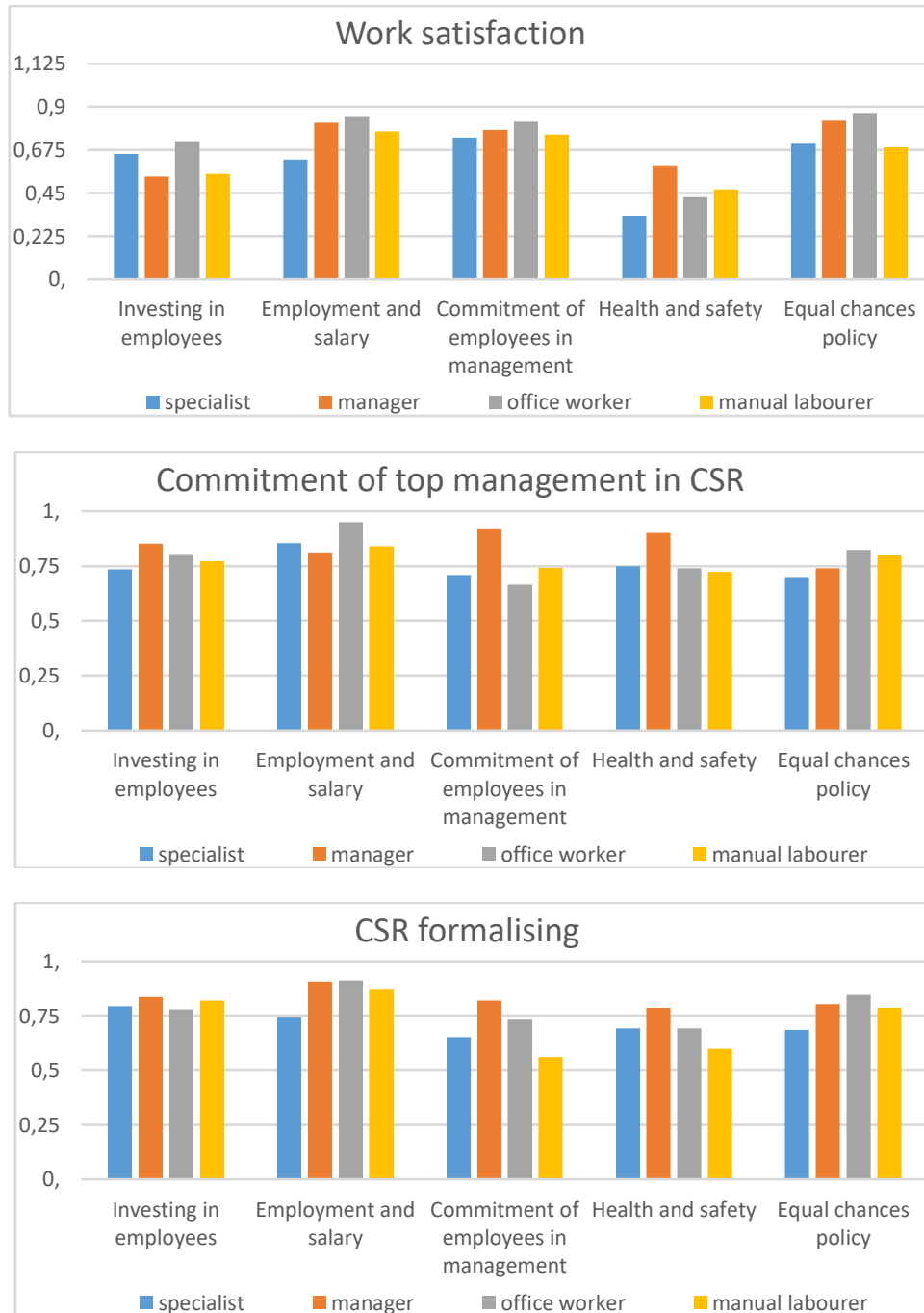


Figure 2. Assessment of the influence of work satisfaction, commitment of top management and CSR formalisation on the perception of CSR activities by employees taking into account their position in the company (Source: own work)

The strongest correlation of work satisfaction can be seen for the following CSR activities: equal chances policy, employment and salary, commitment of employees in management in the groups of office workers, managers and manual labourers, whereas for the group of specialists the CSR activities are: commitment of employees in management and equal chances policy. The conducted research shows that the strongest correlation of commitment of top management can be seen for the following CSR activities: employment and salary and equal chances policy in the groups of office workers and manual labourers, employment and salary and health and safety in the group of specialists and commitment of employees in management and health and safety in the group of managers. The strongest correlation of CSR formalising can be seen for

the following CSR activities: investing in employees and employment and salary in the groups of specialists, managers and manual labourers, and the equal chances policy in the group of office workers. The assessment of the influence of work satisfaction, commitment of top management and CSR formalising on the perception of CSR activities by employees was also analysed, taking into account their seniority (figure 3).

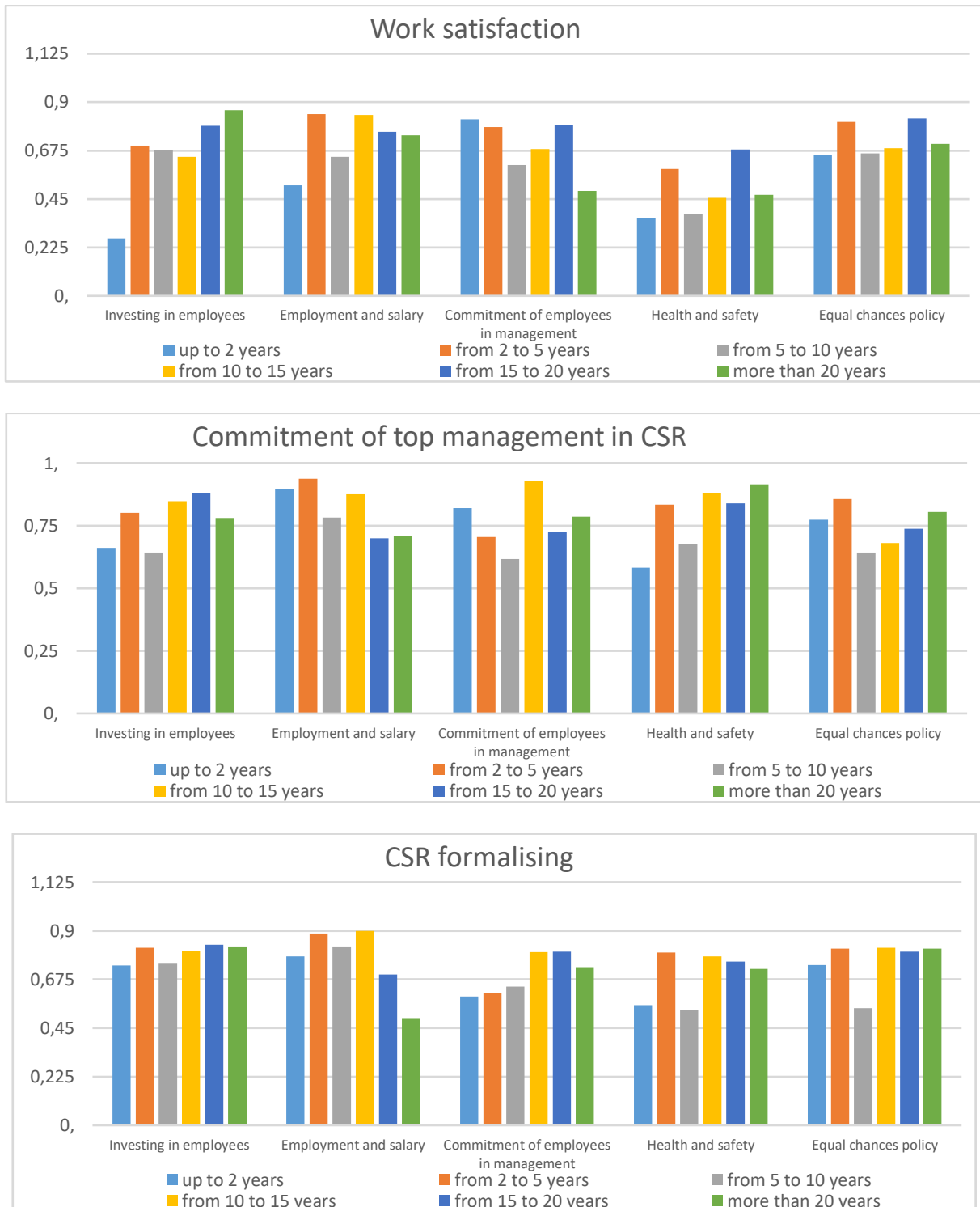


Figure 3. The assessment of the influence of work satisfaction, commitment of top management and CSR formalising on the perception of CSR activities by employees was also analysed, taking into account their seniority (Source: own work)

The strongest correlation of work satisfaction can be seen with the following CSR activities: investing in employees in the groups from 5 to 10 years of work experience and above 20 years of work experience, employment and salary in the groups from 2 to 5 years and 10 to 15 years of work experience, equal chances policy in the group from 15 to 20 years of work experience and engagement of employees in management in the group of employees with up to 2 years of work experience. The conducted research shows that the strongest correlation of commitment of top management can be seen with the following CSR activities: employment and salary in the group of employees up to 10 years of work experience, commitment of employees in management in the group of employees from 10 to 15 years of work experience, investing in employees in the group of employees from 15 to 20 years of work experience and health and safety in the group of employees with more than 20 years of work experience. The strongest correlation of CSR formalising can be seen for the following CSR activities: employment and salary in the group of employees with up to 15 years of work experience and investing in employees in the groups of employees with more than 15 years of work experience.

#### **4. CONCLUSION**

Employees are an important group of stakeholders in companies implementing the CSR concept. Due to the strategic role they fulfil in an organisation, caring for this group should be the basic element of all actions undertaken by the companies. Based on the conducted literature research it can be stated that the activities undertaken under CSR result mainly an increased organisational commitment, increase in work efficiency, lower fluctuation of employees, increase in the feeling of belonging of employees to the company, increase in trust in the organisation. The empirical research conducted on the basis of the questionnaire allowed to verify the research hypotheses. Based on the results of the research it can be stated that the perception of the realised CSR activities by the employees depends to a large extent on their work satisfaction, commitment of top management in CSR and CSR formalisation.

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## **APPENDIX**

### **Category: Investing in employees**

Company invests in professional development of employees  
Company organises trainings, workshops, development programs etc.  
Company invests in perfecting of employee competence

### **Category: Employment and salary**

Company employs its employees based on transparent criteria  
Company pays a fair salary for performed work  
Company has clear criteria of professional promotion  
Company has clear criteria of giving bonuses/rewards  
Company uses a transparent system of employee assessment

### **Category: Commitment of employees in management**

Employees take part in problem solving  
Employees are encouraged to submit their own ideas  
There is a dialogue between the employees and management within the company

### **Category: Health and safety**

Company maintains good health and safety conditions in the workplace  
Company implements procedures increasing work safety  
Company conducts dialogue with the employees regarding the improvement of safety at work  
Company realises health promotion programs  
Company offers additional health insurance

### **Category: Equal chances policy**

Company introduces equal chances policy for all its employees  
Company respects the right of employees to unionise  
There is no discrimination due to religion, gender, world view etc., in the company

**Category: Work satisfaction**

The employee feels needed at work

The employee feels appreciated at work

Employees and managing staff respect me as a professional (expert) in my field

There is a friendly atmosphere among employees

Employees can count on support and mutual help

Work develops my skills and competence

Work ensures a balance between professional and private life

**Category: Commitment of top management in CSR**

Top management of the company initiates CSR activities

Top management informs the stakeholders of the company of the implemented CSR activities

Activities undertaken by top management take into account the needs and expectations of the stakeholders (e.g. employees, contractors, local community)

Top management has a strong sense of responsibility for the implemented activities

Top management has a strong sense of responsibility for its stakeholders

**Category: CSR formalisation**

There is a department/assigned person in the company responsible for the realisation of CSR

The company has a determined policy regarding responsibilities e.g. for environmental or social issues

The company uses CSR norms/standards (e.g. ethical codes, social reporting, environmental management systems, health and safety management systems, ISO 26000)

## USER'S SATISFACTION WITH THE ACCOUNTING INFORMATION IN NON-PROFIT ORGANIZATIONS – CASE OF CROATIA

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### **ABSTRACT**

*Non-profit organizations are extremely important part of the society and therefore the wider public more often seeks out insight into the activities of non-profit organizations as well into spending of public resources and donations. The emphasis is on contributing to the development of the individual and society as a whole. In that context, accounting and financial reporting of non-profit organizations have an important role as a source of quality information. Management of non-profit organization is requiring information for the process of decision making while public authorities are demanding transparency of reporting. Accounting, as a basic source of information about non-profit organization, can be organized differently depending on a number of factors, with two approaches being predominantly: employment of the qualified persons for accounting operations in their own organization or through outsourcing of accounting. Every approach has its advantages and disadvantage. Therefore, this paper explores the way in which the accounting is organized in non-profit organizations in Croatia. The empirical research was conducted in the year 2017 on a sample of associations in the Croatia. The paper examines the correlation between the way in which accounting is performed and the size of non-profit organization measured by the amount of revenues. Moreover, paper presents results regarding user's satisfaction with the quality of accounting information due to different organization of accounting function. Summarized conclusion of the paper is that associations, as a dominant form of non-profit organizations in Croatia, are oriented on outsourcing of accounting function and that the level of user's satisfaction with the quality of accounting information is on very high level.*

**Keywords:** *accounting information, Croatia, quality, non-profit organization*

### **1. INTRODUCTION**

A non-profit organizations (further in the paper NPO) is defined as a legal non-business entity established to achieve a certain public or common interest of individuals, group of citizens or wider community. The main characteristic of NPOs is doing business without earning profit (Vašiček, D., Vašiček, V., 2016, p. 4). This implies that the activities of NPOs are financed from nonreciprocal transfers in other words receiving revenues without having counterpart obligations. Therefore, the most common source of funding of NPOs are donations. Donors and other financiers generally expect that funds are used for the purposes for which they are donated and expect to see the intended spending of funds in the financial statements of the NPOs. The wider public also seeks insight into the activities of NPOs with the special emphasis on the statements of public spending and other donations. The task of accounting is to provide such information as well as to satisfy legal requirements regarding reporting of NPOs. Accounting

is the most comprehensive base for preparing information for the needs of internal and external users (Vašiček, D. et.al., 2011, p. 3). On the one hand, information provided by accounting are used in decision-making processes of management, while at the same time enable the donors, public authorities and other external users to have access to financial statements which meet the prescribed standards of transparency. Therefore, accounting can be divided into two main areas: management accounting and financial accounting (Finkler, Purtel, Calabrese, Smith, 2013, p. 2). This classification reflects the ability of accounting information to serve both as a managerial tool for the decision making process and as a tool for reporting about past events which is useful for wider range of users. Significant differences among profit and non-profit organizations (Antony, Young, 1988, pp. 54; Granof, 1998, pp. 2-8) led to special legislative framework for NPOs. In the Croatia, emphasis regarding legislative framework is put on the regulation of the registration as well as financial accounting activities of NPOs. Most common legislative forms through which the activities of NPOs are registered are associations, institutions, trusts and foundations each defined by a separate law. Financial activities and accounting of all aforementioned types of NPOs is regulated with a single legal act, Law on financial activities and accounting of NPOs (Official Gazette No. 121/2014). This legislative framework defines specific requirements related to accounting and financial reporting as well as other related tasks. The ability to meet these legal requirements has a direct impact on the accounting of NPOs. As it was highlighted, accounting is the basic source of information of NPOs and in the practice can be organized on different ways depending on different factors. Still there are two dominant ways of organizing accounting function in NPOs: employing qualified persons for performing accounting or outsourcing accounting by external executives. Every approach has different advantages and disadvantages. Despite the enormous size of the so-called third sector (NPOs) all over the world and its great impact on the society, there is limited empirical research examining the accounting information from NPOs. In the private (business) sector much more focus is put on the quality of financial reports and accounting information system in the context of different users as well as on outsourcing of accounting function. The goal of the paper is to examine accounting function in NPOs as well as the satisfaction of different users with the quality of accounting information in connection to how accounting is organized. Therefore, this paper presents the results of a survey carried out on a sample of non-profit organizations, more precisely associations in the Croatia. We will attempt to answer two research questions. First, how accounting is organized in NPOs, is it outsourced or not? And whether there is a connection between the amount of revenues and the organization of accounting function? Second, are users of accounting information more satisfied with the their quality if accounting is not outsourced? To answer these research questions, the authors have set two research hypotheses. The first hypothesis is that there is a connection between the revenues amount of the non-profit organization and the way how accounting is organized. It is assumed that the accounting in larger non-profit organizations (measured through amount of revenues) is mostly carried out independently, by the organizations own employees, while smaller non-profit organizations tend to outsource their accounting operations. The second hypothesis states that user's quality satisfaction with accounting information is higher if the accounting function is organized within the non-profit organization. It is assumed that the satisfaction with the quality of the accounting information will be higher when the information is obtained from internal sources, in comparison to situations where users acquire their information from out-sourced accounting function. The paper is organized as follows. After the introduction chapter, the second chapter briefly presents characteristics of accounting and financial reporting of non-profit organizations in the Croatia. The third chapter brings empirical part of the paper whereas the observed data and methods as well as research results and discussion are presented. Conclusions and recommendations for future research are given in the final, fourth, chapter.

## **2. CHARACTERISTICS OF ACCOUNTING AND FINANCIAL REPORTING OF NPOs IN THE CROATIA**

In the past, there were certain disagreement regarding the exact classification and differentiation of NPOs in Croatia. Today, Croatian NPOs are defined through a legislative framework, in which they are classified as (Vašiček, D., Vašiček, V., 2016, p.8):

1. Budgetary users - government (state) NPOs, or
2. Non-profit organizations (in the narrow sense) – non-government (independent) NPOs.

It has already been emphasized that the term “non-profit organization” does not explicitly determine the exact nature of its legal personality. Basic legal forms of NPOs in the Croatia are:

- Associations whose activities are regulated by the Law on Associations (Official Gazette, No. 74/2014).
- Institutions whose activities are regulated by the Law on Institutions (Official Gazette,, No.76/1993, 29/1997, 47/1999, 35/2008).
- Trusts and foundations whose activities are regulated by the Law on Trusts and Foundations (Official Gazette, No.36 /199, 64/2001).
- Other legal forms established by special laws (Law on Political Parties (Official Gazette, No. 76/1993, 111/1996, 164/1998, 36/2001), Croatian Red Cross Law (Official Gazette 71/2010)).

The survey presented in this paper was conducted on a sample of NPOs registered as associations. Associations are the most common form of non-governmental, non-profit organizations in the Republic of Croatia. The data from the Registry of the Association that are available on the web site indicates that there are over 51.000 registered, active associations.

According to the Law on Associations, the Association is any form of free and voluntary joining of more than one physical or legal person for the following purposes: in order to protect their prosperity or commitment to protect human rights and freedoms, to protect the environment and nature and to sustainable development and for achieving diferent humanitarian, social, educational, scientific, sporting, medical, technical, informational, professional or other beliefs and objectives that are not in conflict with the Law. It is important to highlight that all aforementioned purposes are without the intention to gain profit or other economically valued benefits. Therefore, activities of every association are based on the principles of independence, publicity, democratic organization, non-profitability and freedom of activity in public life.

According to Vašiček, D. and Vašiček, V. (2016, p. 99) the most common sources of funding for non-profit organizations in Croatia are:

- budgetary sources and related public resources – state budgets and local budgets (budgets of local and regional self-government units), along with their budgetary users, funds generated from lottery games (divided according to the decision of the Government of the Croatia) and funds of the National Foundation for Civil Society Development and funds realized from projects and programs of the European Union and other international organizations,
- non-fiscal sources - donations, sponsorship of certain activities in various forms with the obligation of highlighting brand marks, sale of goods, products or services for the purpose of collecting funds to finance non-profit organizations.

Associations can obtain funds from previously mentioned different sources. Funding from public sources is regulated by the Regulation on the criteria, standards and procedures of financing and contracting programs and projects of the public interest implemented by



associations (Official Gazette, No.26/2015). Funding is carried out through public tenders, which ensures transparency of the funds allocation, allows for the receipt of a large number of quality submissions and the selection of the highest quality programs. It also informs the wider public on the associations priorities and areas of interest. In order that the NPOs receive funds from public sources, they firstly must meet a set of criteria and benchmarks. This includes proper fulfilment of prescribed obligations, adequately published programs and financial statements for the previous year, establishment of a sound model of financial management and control and finally, prevention of conflicts of interest. The financial accounting of associations and other NPOs is regulated by the Law on financial activities and accounting of non-profit organizations that entered into use on January 1, 2015 (Official Gazette No. 121/2014). Based on the Law, the Registry of NPOs at the Ministry of Finance was established and it became the central source of data about NPOs, needed to determine and monitor mandatory preparation and submission of financial statements, assess financial positions and operations, and ensure defined use of budgetary funds. Accounting of NPOs is also based on generally accepted accounting principles of accuracy, truthfulness, reliability and individual position reporting. Accounting is based on the principle of double-entry bookkeeping and a full accrual accounting basis. NPOs are obliged to record business events, maintain business books, and compile financial statements according to the underlying principles of proper accounting, and according to the prescribed schedule of accounts from the Non-Profit Accounting Plan (Regulation on non-profit accountancy and accounting plan, Official Gazette, No.16 / 2015). Exceptionally, it is possible to conduct simple bookkeeping and apply the cash accounting principle. This exception is permitted on the condition that the value of the assets at the end of each of the previous three years and annual revenues of each of the previous three years do not exceed 230.000,00 kn. Through the application of the Law on financial activities and accounting of non-profit organizations, the reach of legal framework extends beyond the scope of accounting and financial reporting and spreads to financial management, financial business principles, financial plans, budget reporting, auditing and public disclosure of annual financial statements, financial management and accounting, and other areas related to financial operations and accounting of NPOs. Aforementioned requirements regarding financial accounting operations of NPOs increase the number of tasks and demands put in front of the accounting function. In that context Parsons (2003, p. 113) have highlighted the fact that instead of looking for the "best accounting framework" for NPOs, researchers are asking whether accounting reports are useful to decision-making process. NPOs are now facing the challenge of meeting these rising demands in other words how to establish a financially and organizationally effective accounting function. This problem was closely examined in the empirical part of the paper.

### **3. EMPIRICAL RESEARCH**

#### **3.1. Data and methods**

The empirical part of the paper investigates accounting system of NPOs with the emphasize on the way how accounting is organized as well as the level of satisfaction of different users with the quality of accounting information. In order to gather the necessary information, an empirical research was conducted by using the survey questionnaire. Data is generally collected on the sample of the population in a way to be able to generalise the findings to the population (Pinsonneault and Kraemer, 1993). The population of our survey was limited on all associations in Croatia which are submitting reports to the Ministry of Finance. The number of this associations for the year 2017 is 31.444 according to the unofficial information. Associations are most represented form of NPOs and therefore for the purpose of this survey we have used random sample of 1.240 associations. The questionnaires were sent by e-mail in online form in October 2017.

The purpose of the questionnaire was to analyse and evaluate accounting information systems of NPOs. Therefore, it was divided into the following parts:

- A. General information;
- B. Way of performing accounting and cost of accounting function;
- C. Assessment of the quality of accounting information.

For the purpose of this paper, our primary goal was to answer the research questions by testing two hypotheses:

- H<sub>1</sub>: There is an connection between the revenues amount of the non-profit organization and the way how accounting is organized.
- H<sub>2</sub>: User's quality satisfaction with accounting information is higher if the accounting function is organized within the NPO.

To obtain the highest possible comprehensibility of the questions, a few pilot questionnaires were carried out. The suggestions and comments of accounting staff and management of NPOs in the pilot phase have been an enormous contribution to the quality of the research. The purpose and objectives of the research were explained at the beginning of the questionnaire, ensuring respondents anonymity and confidentiality of the information obtained. The questionnaire was mostly structured from closed type of questions and for assessment of satisfaction we used Likert scale.

### 3.2. Research results and discussion

The response rate for the questionnaire was 14,19% (176 out of total sample size 1.240). Using PHStat 2 and SPSS tool the statistical analysis of descriptive statistics, Chi-Square Test Contingency and Z Test for Differences in Two Proportions table was prepared. For the purpose of this paper regarding sample characteristics, we will highlight the structure of employees in the sample as well as the average annual amount of revenues of NPO. From the table 1. it is evident that the biggest percentage of respondents (36,36%) answered that they have 2-5 persons employed in the organization, followed by 31,82% of respondents that answered that they do not have permanent employees. Very small percentage of respondents have more than 10 persons employed.

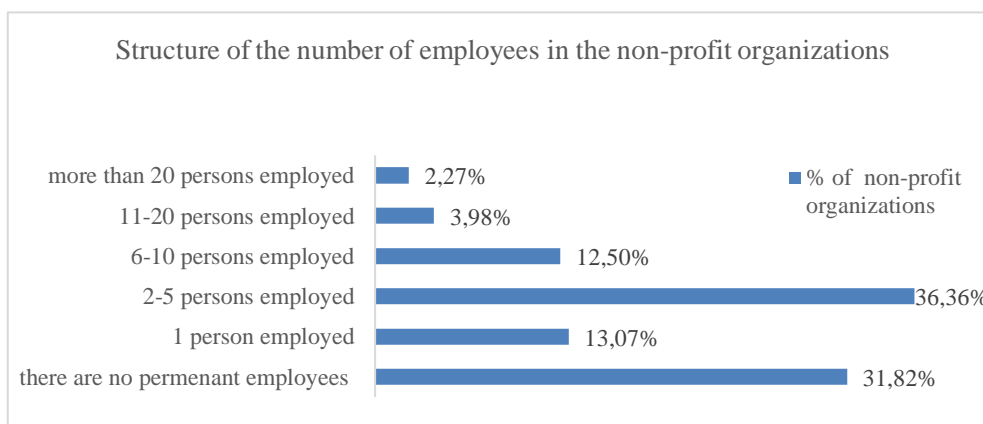


Figure 1: Structure of the number of employees in the sample (survey)

According to table 2. that presents the average annual amount of revenues based on the average of the last 3 years, it is obvious that 30,68% of respondents have annual revenues 100.001-500.000. On the other hand only 3,41% of respondents have revenues higher than 5.000.000 kn.

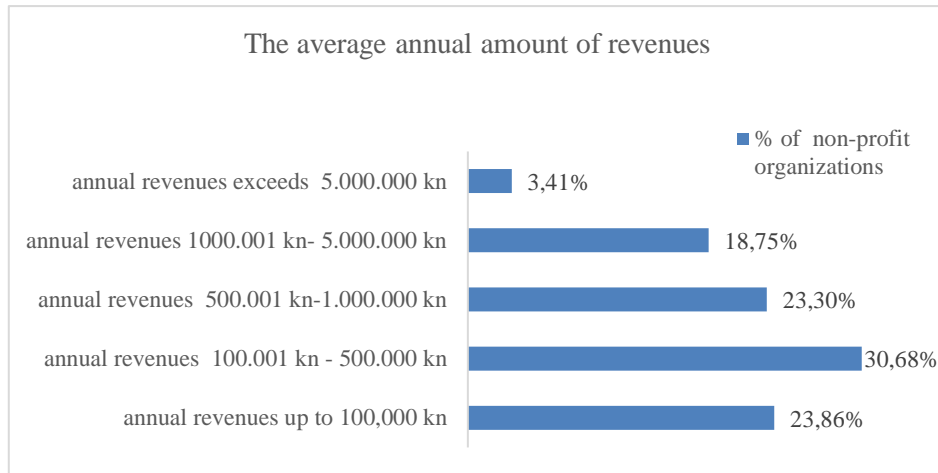


Figure 2: The average annual amount of revenues based on the average of the last 3 years (survey)

The first hypothesis was addressed to investigate if there is an connection between the revenues amount of NPOs and way how accounting is organized. For that purpose we used Chi-Square Test. The first variable is the way of performing accounting in NPO – outsourced or not (variable X) and the second variable is the average annual amount of revenues (variable Y). The zero hypothesis of the Chi-Square Test ( $H_0$ ) assumes that the two observed variable are independent and the alternative hypothesis ( $H_1$ ) assumes that the observed variables are dependent on, or in other words that there is an association between them. Conducted statistical analysis is showing that there was a significant association between the average annual revenues and whether accounting is outsourced or not  $\chi^2(1)=18.38$ ,  $p<0.001$ . This seems to represent the fact that, based on the odds ratio (Table 1), the odds of having higher revenue were 10.33 times higher if they did not outsourced the accounting function than if they outsource. Therefore, the first hypothesis is confirmed. Also, based on survey results from the table 1 it is evident that 153 out of 176 respondents are outsourcing accounting function.

Table 1: Contingency table of variables X and Y, number of NPOs (survey)

Way of performing accounting in NPO (variable X)	The average annual amount of revenues based on the average based on the last 3 years (variable Y)		Total
	Average annual revenues up to 500.000 kn	Average annual revenues 500.001 kn and more	
a) is performed by a permanently employed employee b) carried out by a staff member employed on a fixed-term contract	3	20	23
c) performed by a staff member employed through a part contract d) carried out by a book-keeping service e) they are combined - an employee and a bookkeeping service f) they are performed in another way	93	60	153
Total	96	80	176

According to Yetman, M. H. and Yetman, R.J. (2013, p. 1044) financial reports play an important role in monitoring managerial actions as they provide a means for different users. Therefore, it is extremely important to know whether users are satisfied with the quality of accounting information. In the second hypothesis it is assumed that users of accounting

information are more satisfied with the quality of accounting information if accounting activities are performed independently than users where the accounting function is outsourced. Before we test this hypothesis, we have to investigate who are users of accounting information. The primary user of NPOs in most of surveyed NPOs is a person who is authorized to represent the organization (50,57%) while other users are Assembly of the Association, Executive Board or other executive body, The Supervisory Body of the Association, A person authorized to represent the association, Executives, Service Officers, Project Managers, Other person (see table 2).

Table 2: Structure of primary in other users in the sample of NPOs (survey)

Users of accounting information	PRIMARY USERS	OTHER USERS
Assembly of the Association	4,55%	25,64%
Executive Board or other executive body	9,09%	20,79%
The Supervisory Body of the Association	3,41%	18,01%
A person authorized to represent the association	<b>50,57%</b>	18,94%
Executives, Service Officers, Project Managers	31,82%	15,47%
Other person	0,57%	1,15%

Respondents in the sample were asked to assess by using Likert scale (extremely satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied extremely dissatisfied) the satisfaction with the quality of accounting information. We evaluated separately the satisfaction for primary users and for other users, but it is important to highlight that the same respondents gave an assessment for both types of users (primary and other). From the figure 3, it is visible that satisfaction for both, primary and other users, is on the very high level according to conducted survey.

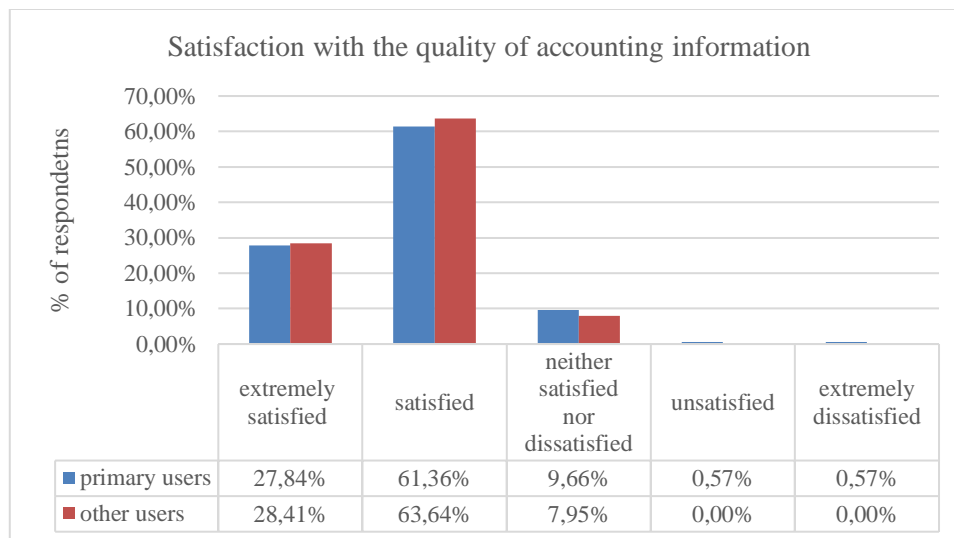


Figure 3: Satisfaction with the quality of accounting information (survey)

For the purpose of testing second hypothesis, we have used upper tailed Z Test for Differences in Two Proportions. It is assumed that the percentage of primary users that are extremely satisfied or satisfied with the quality of accounting information is higher in organization where accounting is not outsourced. On the same way we tested satisfaction of other users. According to the results it can be concluded that the null hypothesis could not be rejected at the 5% significance level ( $z = 1.07$ ,  $p\text{-value} = 0.1426$ ). In other words, assumption that the percentage of primary users that are extremely satisfied or satisfied with the quality of accounting information is smaller in organization where accounting is not outsourced is not rejected. The

same conclusion is drawn for other users as well at significance level of 5% ( $z=0.69$ ,  $p\text{-value}=0.2465$ ). Consequently, the second research hypothesis, which states that user's quality satisfaction with accounting information is higher if accounting function is organized within the NPO, is rejected.

#### 4. CONCLUSION

Non-profit organizations all over the world have a great importance on the economy, but still there is a limited research examining the quality of information more precisely quality of accounting information system of NGOs. Therefore, researchers are asking whether accounting in NPOs is useful to decision-making process. Accounting is an important function for every organization regardless of profit or non-profit orientation. This paper provides an answer on two research questions. First research question was connected with the organization of the accounting function in Croatian NPOs. Conducted empirical research has shown that majority of NPOs in the observed sample are outsourcing accounting. However, further statistical analysis has confirmed positive connection between the amount of revenues and organization of accounting function because the odds of having higher revenue were 10.33 times higher if they did not outsource the accounting function than if they outsource. Moreover, in the second research question we have investigated user's satisfaction with the quality of accounting information. We, as authors, have expected in the initially set hypothesis that user's quality satisfaction with accounting information is higher if the accounting function is organized within the NPO. But this hypothesis was not confirmed because, regardless of the way how accounting function is organized, users are extremely satisfied or satisfied. This surprising result has opened a space for future research related to the types of information that are available from current accounting function and except that it is necessary to investigate management requirements regarding accounting information for decision-making process. In addition to the financial information, the problem of non-financial information that are important for different users of NPOs should be also taken into account in the future research.

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## TOWARDS GREATER TRANSPARENCY - DEVELOPMENT OF CORPORATE DISCLOSURES: EVIDENCE FROM POLISH STOCK MARKET

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### **ABSTRACT**

*Development of corporate disclosures and increasing companies' transparency has been getting considerable attention in recent years. Originally, accounting scandals and misleading financial reports were the main reason to demand greater transparency. Subsequently, besides investors a number of other stakeholders started to communicate their information expectations towards companies' publications. To meet the demand for greater transparency a variety of new approaches to corporate reporting have been proposed. In particular, annual reporting has been stimulated to integrate an ever growing extent of non-financial disclosures. Thus – environmental, social, governance and integrated reporting are broadly promoted. The disclosures are intended to create a context for financial reports and let the stakeholder gain a more comprehensive view of organization's performance and impacts made in different areas. The evolution of corporate disclosures has been driven on multiple levels. Initially non-governmental moves (associations, standard-setters) played a major role in the process, what resulted in numerous frameworks, guidelines and recommendations created. Afterwards, lawmakers, in acceptance of the growing demand for transparency, started to introduce legal obligations regarding corporate reporting. Currently, non-financial reporting is partially regulated and simultaneously companies are encouraged to apply frameworks voluntarily. The aim of this paper is to investigate the progress in increasing corporate transparency on a sample of biggest Polish listed companies through years 2001-2013. Firstly, key motives for greater transparency are described in relation to corresponding types of corporate reporting. Then, different types of researched companies' disclosures are examined. To observe changes in transparency level a disclosure measure was created and employed to analyse annual reports content. Quantified results provided some interesting insight into types of information organizations were ready or reluctant to disclose and how those decisions changed over time.*  
**Keywords:** *corporate disclosure, corporate reporting, non-financial reporting*

### **1. INTRODUCTION**

The quality of corporate reporting is a subject of continuous discussion. A significant growth of interest in the area has been observed since the turn of the 21st century, when a number of major accounting scandals and business failures took place. They were related to poor quality corporate reports of large corporations, which presented misleading information to market participants. Those events had a negative impact on capital markets, as trust of investors was lost. A lot of effort around the world was then made to rebuild it. Many initiatives were launched by governments, standard setters, think-tanks, academics to work toward improving corporate disclosure, which resulted in new or updated regulations and guidelines. It is therefore interesting how corporate reporting has evolved since then and whether and in which areas it has improved.

## **2. DRIVERS AND MOTIVES OF CORPORATE REPORTING EVOLUTION**

### **2.1. Building trust**

Investors' confidence lost in the wake of accounting scandals (Gornik-Tomaszewski, McCarthy, 2005) at the beginning of 21<sup>st</sup> century (e.g. cases of Enron, WorldCom, Tyco, Parmalat) had to be rebuilt. Reporting process turned out to be flawed and provided reports of limited reliability. Corporate reports' users could not make informed assessments and decisions. Market participants became highly sensitive to the quality of corporate publications. Any sign of wrongdoing could potentially destroy confidence and influence share prices (Business Transparency in a Post-Enron World, 2002). Rebuilding trust in financial reporting was critical to support liquid capital markets. New regulations (like Sarbanes-Oxley Act in USA or Transparency Directive in the EU) were introduced to improve the quality of corporate reports. However, a few years later unreliable reporting has once again become a serious issue during the credit crunch of 2007 (Palacky, 2008). Those events support the idea of information being the "lifeblood" of capital markets. Institutional or small investors engage and risk their money when choosing between different investment alternatives. They rely on information companies report and require high quality and timely disclosures. High quality disclosure can be understood as true, fair and understandable view of the business. Investors expect that the benefits or consequences of the risk they take will result only from the decisions they make, from their ability to assess and predict company's performance. In other words, negative outcome of the investment should not result from flawed information (DiPiazza, Eccles, 2002, p. 9). Efficient capital markets are the foundation of contemporary economies. Globalization, deregulation of capital markets (allowing for cross listings) creates international competition for capital. Corporate transparency became a national and international issue (Rebuilding Public Confidence in Financial Reporting: An International Perspective, 2003). Financial position of many people is directly or indirectly related to assets traded on capital markets. Building and maintaining confidence in capital market mechanisms is therefore one of the key drivers for improving corporate disclosures.

### **2.2. Corporate governance**

Dispersed ownership of listed companies limits shareholders' ability to individually decide about their operations. A hired management, on behalf of the owners and controlled by supervisory board, runs the business. Thus development of capital markets caused separating ownership from control (Fama, Jensen, 1983). It allows managers to focus on their own (usually short-term) benefits, instead of aiming at building sustainable company value (Sloman, 2006, p. 206) and creates space for agency conflicts. Corporate governance mechanisms were developed to mitigate the principal-agent conflicts. These include regulations and best practice codes defining management responsibility for reporting on company's performance. To enable shareholders to influence and discipline managements a disclosure regime promoting transparency is of central importance. Poor quality information reported by management increases information asymmetry. Shareholders and debt providers are then at an informational disadvantage (Armstrong, Guay, Weber, 2010). Stock price informativeness can suffer and valuations may be distorted (Jin, Myers, 2006; Morck, Yeung, Yu, 2000; Zhongbo, Liuchuang, Gaoliang, 2013). Due to increased opacity users are more likely to rely on other sources of information (than financial statements) when trading (Miller, 2001). Investor protection is significantly reduced. Uneven access to information proves market mechanism flaw. Deficient information creates uncertainty and can result in adverse selection (Akerlof, 1970). Higher levels of information asymmetry can create space for moral hazard and crimes like insider trading (Gaved, 1998; Leadbetter, 1999). In a low transparency environment reluctance to trade against those with access to privileged information may result in a decision to quit trading. As a result, liquidity lowers and the cost of capital rises (Diamond, Verrecchia, 1991). Market



effectiveness significantly lowers and state or regulators interventions are often required to impose stricter laws (e.g. Sarbanes-Oxley Act). To reduce the probability of impact of the above mentioned anomalies owners need access to regular and reliable information to assess the decisions and stewardship of the management (G20/OECD Principles of Corporate Governance, 2015). High quality financial and non-financial reporting reduces information asymmetry and is the basis for shareholders' ability to exert their rights and thus for effective corporate governance (Turner, 2009, p. 10).

### **2.3. Financial reporting**

The primary users of financial reporting are capital providers (investors, lenders) who use it to make decision about trading or engaging their money (The Conceptual Framework for Financial Reporting, 2010; Exposure Draft ED/2015/3 Conceptual Framework for Financial Reporting, 2015). Financial statements remain the main source of information for investors to evaluate and predict companies' performance. They should deliver true and fair view of financial position and performance of the company. There is a number of issues in meeting this expectation. Accrual accounting may lead to reducing corporate transparency. Presentation of historical values, often divergent from present values (e.g. market values) is criticized for limited usability when forecasting income or cash flow. As accounting developed a fair value concept was introduced. Since then fair and historical values may appear on the balance sheet simultaneously, which do not increase transparency (DiPiazza, Eccles, 2002, p. 34). Moreover, companies may often choose the measurement method, what creates problems when comparing values from different entities. Comparing different reports is challenging, as IFRS or GAAP standards do not impose strict rules on financial statements presentation. Some accounting concepts date back to times, when physical assets used to be the key value drivers. Currently, intangible or intellectual capital, non-financial factors seem to be central to value creation (Daum, 2003, p. 28). However, most of them cannot be presented due to lack of accepted measurement methods and definitions. This results in companies' market values wide apart from book values. Ever growing business complexity (e.g. financial engineering) requires new standards and methods of recognition and measurements. Financial reporting does not always keep pace with this evolution, as development and enforcing new approaches takes time. Apart from that, it often requires accounting standards to be more complex. Financial reports are becoming larger and more difficult to analyse. These issues relate to reports' preparers as well as their users. Reduced comparability of financial statements, market values diverging from book values, problems with accounting for intangible and intellectual resources seem to be the main issues driving the development of financial reporting. At the same time, a necessity of non-financial reporting becomes evident. It helps to put financial statements in context and complete the company's position and performance picture.

### **2.4. Stakeholders' expectations**

Businesses do not operate in separation from their environment. They require resources, which are provided by various entities. These include capital providers as well as employees, local governments and societies, customers, natural environment. Relationships with stakeholders are crucial to creation and maintaining a sustainable value (Tapscott, Ticoll, 2003, p. 8.). An idea that the long-term value cannot be created without accounting for impacts on the environment is becoming recognized. Stakeholders theory assumes the ability to create value both for the owners and for the society and that the businesses following this concept could outperform those, who ignore stakeholders expectations (Wheeler, Sillanpää, 1997, p. XI.). Globalization of financial markets and technology development facilitated easier access to capital and allowed large international and supranational corporations to grow. These entities manage substantial resources and can exert significant impacts on environment. They are more

to likely to shape the markets than to be subject to its mechanisms. Their great bargaining power reduces their dependence from governments (Post, Preston, Sachs, 2002, p. 11). Stakeholders have become aware of it and try to influence managements so that they pay more attention to impacts made on them (Vogel, 2005, p. 9.). Thus a need for increasing non-financial reporting became clearer.

### **3. APPROACHES TO CORPORATE REPORTING**

Corporate reporting has been changing in multiple areas for the last two decades. Some changes required imposing new or updating existing regulations. Others are presented as guidelines or frameworks, application of which remains mostly in reporter's gesture. The most important trends in corporate reporting include:

- harmonization of accounting standards (US GAAP and IFRS),
- introducing stricter corporate governance related reporting duties (Sarbanes-Oxley, Transparency Directive),
- introducing corporate governance codes of best practice, applied on a "comply or explain" basis,
- corporate social responsibility and sustainability reporting getting more attention from governments, general rules of reporting enforced as laws,
- multiple initiatives focused on providing frameworks and guidelines for social, environmental and sustainability reporting,
- initiatives aiming at presenting approaches to intellectual capital reporting,
- integrated reporting as the most recent reporting approach built on the foundation of previous financial and non-financial reporting frameworks;

The areas of most significant improvements in corporate reporting are related to all kind of non-financial reporting. These are a result of the assumption, that financial statement alone will never be able to provide enough information for forecasting company's performance. Narrative disclosures (mainly in management report, sustainability and CSR reports, corporate governance reports) help understand the numbers from financial reports. Most of those trends have been observed in corporate reporting on capital markets all over the world. They are getting attention also on the less developed markets like the Polish one. Reporting related regulations in Poland are mainly dependant on the European Union laws. At the same time, Polish listed companies seem to recognize international frameworks and guidelines and the number of entities applying them is growing. It was therefore interesting to investigate how corporate reporting has changed over the years and to what extent Polish companies followed various reporting trends.

## **4. DATA AND METHODS**

### **4.1. Disclosure research methods**

Studies on corporate reporting employ various approaches to quantifying disclosure levels. These include subjective and semi-objective methods. Subjective methods relate to corporate disclosure assessments published by analysts. Semi-objective methods include textual analysis and disclosure indexes (Beattie, McInnes, Fearnley, 2004). Textual analysis involves reading the whole text of the disclosure and focus mainly on readability and linguistics metrics (Sydserff, Weetman, 1999; Jones, Shoemaker, 1994). Disclosure indices, on the other hand, require ex ante a list of expected items, against which the disclosures are then examined. Disclosures not matching any list's item are ignored. Indices with binary and ordinal scale are used. Binary scale presents whether the particular item from the list occurred in the studied material. Ordinal scale allows to record the extent of the disclosure (not only its occurrence).

Disclosure indices enable researchers to assess all types of disclosures including non-textual ones (graphs, tables, schemas) and seem to be the most often used in research on reporting.

#### 4.2. Disclosure measure used in the study

An analysis of frameworks has been conducted in order to prepare a list of items, that are supposed to be present in an annual report of a transparent company. These included items from reporting guidelines in various areas: financial and economic, value creation, intellectual capital, social, environmental, governance. The index was supposed to reflect information expectations of various stakeholders (not only owners and capital providers). The study employed a disclosure index with an ordinal scale ranging from 0 to 5. The list consisted of 94 items grouped into 10 areas. Table 1 presents an overview of the index disclosure groups.

Disclosure group	Maximum score
Financial statement with notes	115
Company, market and business environment	40
Strategy	45
Forward-looking information	25
Corporate governance	60
Group and ownership structure, shares	25
Risk	35
Performance and value creation	55
Stakeholders	45
Usability of the report	25
<b>Total</b>	<b>470</b>

Table 2: Disclosure index structure (own elaboration).

#### 4.3. Sample

The study was conducted on a sample of 18 Polish companies, that are listed on the Warsaw Stock Exchange's main market. Selected companies were characterized by biggest capitalization and liquidity in 2001 and continued operations at least until 2014. The sample contains production, service and financial companies.

Disclosure scores were based on assessment of annual reports and other supplementary reports, in particular:

- financial statement with notes,
- management report,
- corporate governance statement,
- corporate social responsibility report, sustainability report;

The study covers disclosure index values based on annual reports for years 2001, 2005, 2009, 2013. Observation of evolution of corporate disclosure over twelve years was possible.

### 5. STUDY FINDINGS

Years selected for the study coincide with major events related to corporate reporting. In 2001 one could observe a number accounting scandals in USA and Europe, which were followed by an introduction of new, stricter regulations. Trust in corporate communication had to be rebuilt and its loss caused multiplication of efforts towards improving reporting. The level of transparency was expected to grow. Poland joined the EU in 2004 and since 2005 listed companies were obliged to publish consolidated annual reports in accordance with IFRS/IAS,

which contributed to further changes to companies reports. In 2009 one could observe another issues with reporting reliability related to the global financial crisis started in 2007. Corporate transparency overall score (measured with the disclosure index) for the selected 18 companies is presented in Table 2.

Mesure	2001	2005	2009	2013
Mean	125,5	178,9	219,7	229,7
Standard deviation	21,3	25,7	34,4	41,6
Curtosis	-0,5	1,5	1,3	1,0
Skewness	-0,4	-1,1	-1,1	-1,1
Q1	113,0	171,8	200,3	216,0
Median	126,5	184,0	229,0	235,5
Q3	142,8	190,5	242,0	256,0
Range	72	102	134	157
Minimum	82	120	129	125
Maximum	154	222	263	282
N	18	18	18	18

Table 3: Descriptive statistics of disclosure index values (own elaboration).

From the mean disclosure scores it becomes apparent, that transparency level has steadily risen over the investigated period. Increase in an overall level of disclosure is suggested also by rising values of the first and third quartiles, which are higher in every following period.

In 2005 the mean score is 43% higher than in 2001. In 2009 the rise is much lower and the score is 23% higher than in 2005. Only a small rise of only 4,5% is recorded in 2009. In all cases median is higher than mean what implies left-skewed distributions. The majority of disclosure scores are higher than median. The data suggest that the biggest improvements in annual reports quality occurred in the years 2001-2005. In subsequent periods the rate of disclosure level increase is significantly lower. 2013 in particular brought only a minor rise in the average score. It is interesting that over four years the disclosure index remained almost on the same level. Index consisted of 10 groups of information, that were related to various thematic areas. The average scores in particular areas is presented in Table 3 and their change rates in Table 4.

Index group	Mean				Mean / maximum			
	2001	2005	2009	2013	2001	2005	2009	2013
Financial statement with notes	47,1	67,6	73,9	73,7	40,9%	58,8%	64,3%	64,1%
Company, market and business environment	12,9	16,8	17,8	18,5	32,4%	42,1%	44,4%	46,3%
Strategy	11,3	15,1	16,6	17,4	25,2%	33,6%	36,9%	38,8%
Forward-looking information	3,3	4,6	4,9	4,4	13,1%	18,2%	19,6%	17,6%
Corporate governance	13,3	20,3	31,6	33,1	22,2%	33,8%	52,7%	55,1%
Group and ownership structure, shares	14,0	15,1	17,4	17,8	56,0%	60,2%	69,8%	71,3%
Risk	2,3	8,9	18,3	18,7	6,7%	25,6%	52,4%	53,5%
Performance and value creation	15,0	18,6	21,4	21,1	27,3%	33,8%	39,0%	38,4%
Stakeholders	0,4	3,2	7,4	14,3	0,9%	7,0%	16,4%	31,9%
Usability of the report	5,8	8,7	10,2	10,6	23,3%	34,9%	40,9%	42,4%

Table 4: Average scores across ten index groups (own elaboration).

Analysis of disclosure scores in groups in relation to the maximum possible score allows to identify annual report's areas with highest and lowest quality reporting. The data show that "Group and ownership structure, shares" is the highest rated reporting area. The note is more than 50% of maximum score in all periods. "Financial statement with notes" is another group which recorded high notes through the four analysed periods. It may be the result of being a relatively highly regulated disclosure. Financial statements and information about ownership structure seem to have been at a level, which companies were mostly satisfied with. The improvements in those are significantly lower than in other areas. Corporate governance disclosures scores suggest that the efforts of regulators and standards setters to increase its transparency were effective. Change rates 2005/2001 and 2009/2005 are above 50% and the score in 2009 is 138% higher than in 2001. It proves, that the state of reporting on corporate governance from 2001 required significant improvements and that companies recognized this.

Index group	Change rate		
	2005/2001	2009/2005	2013/2009
Financial statement with notes	43,5%	9,3%	<b>-0,3%</b>
Company, market and business environment	30,2%	6,0%	3,9%
Strategy	33,6%	9,9%	4,8%
Forward-looking information	39,4%	6,5%	<b>-10,2%</b>
Corporate governance	52,6%	55,7%	4,7%
Group and ownership structure, shares	7,9%	15,2%	2,3%
Risk	287,0%	105,6%	2,2%
Performance and value creation	24,0%	15,1%	<b>-1,4%</b>
Stakeholders	700,0%	131,3%	93,2%
Usability of the report	50,0%	17,2%	3,9%

Table 5: Average scores change rates across ten index groups (own elaboration).

A noteworthy positive change in reporting quality is to be observed in "Risk". Comparably to "Stakeholders" it was one of the lowest scored disclosures in 2001. The average score has increased almost fourfold in years 2001-2005. In 2009 the companies received above 50% of maximum points. Reporting levels of risk demonstrated progress similar to that of corporate governance. "Strategy" is supposed to be the core of a company's annual report. Yet, the numbers are showing that over 12 years only a small progress has been made. The average score is rising, but it is only 39% of maximum points in 2013. The note increase was 54% over the whole studied period. There was a significant change in the first 4 years (2001-2005), whereas the latter 8 years brought considerably lower rises. "Forward-looking information" is the lowest overall rated disclosure. The score does not exceed 20% in any of the studied periods. The change rates are low, too. It is noteworthy, that in 2013 the average score has fallen by 10%, what suggests that the level and quality of this disclosure has decreased and companies are reluctant to provide forecasts and prospective information. "Stakeholders" were the lowest rated disclosures in 2001. This section covers mainly corporate social responsibility reporting and sustainability reporting. In 2001 only 4 out of 18 companies received any scores at all. It suggests, that the leading listed companies did not pay much attention to meeting stakeholders' information needs. 2005 brought a score rise of 700%. Despite this positive change, the average note equalled to only 7% of maximum points in 2005. The increase in reporting level and quality continued through 2009 and 2013. The score rose 131% in 2009 and almost doubled in 2013.

However, it took 8 years (2001-2009) for the analysed companies to improve their social and environmental reporting to a relatively small extent. In 2009 the average score was only 16% of maximum.

## 6. CONCLUSION

Despite the high level of aggregation of the presented disclosure scores some corporate reporting trends could be observed. In most of the areas the biggest increase in level and quality of disclosure were noted in the first 4 years of the investigated period. Changes in 2009 or 2013 were considerably lower. Financial statements and information on ownership and group structure recorded the highest disclosure scores through 12 years. One could presume, that it roots mainly in the high level of regulatory obligations. There seems to be a significant improvement in financial reporting in years 2001-2005, which is to be attributed to the introduction of IFRS into Polish accounting law. Next years did not bring any relevant disclosure quality increases. After accounting scandals at the beginning of the 21<sup>st</sup> century corporate governance disclosures seem to have required the biggest improvements. Introducing new regulations and promoting codes of best practice were effective, as there has been a significant increase in reporting quality observed. There were several areas identified, in which corporate reports could be refined. Firstly, reporters should think of presenting higher quality disclosures on strategy, which should be a crucial part of every annual report. Secondly, future oriented disclosures, which are supposed to provide insight into management's plans and goals, are an issue, as companies seem to be reluctant to report on them. Additionally, in 2013 some companies must have had decided to resign from publishing some information or reduced its details. The source of such decision should be further investigated. Thirdly, social and environmental reporting seem to be getting attention at a very slow rate. These disclosures are mainly a result of voluntarily applied guidelines and frameworks. There are some regulations introduced being in the area, but they are very general. Lack of a more detailed reporting scope lets some companies prepare CSR reports, which are more likely to serve as a public relations tool than to provide meaningful insight into how stakeholders' information needs are accounted for. The growing recognition of sustainability and integrated reporting on highly developed markets is going to motivate companies to redefine their thinking and start to meet shareholders as well as other stakeholder information needs. There are limitations to the study. Twelve years period has been covered and disclosure index was recorded for 18 companies. The limited scope is mainly a result of the time-consuming research method used, which required assessment of 72 annual reports against a 94 items disclosure index. However, the companies selected for the study were characterized by highest capitalization and shares' liquidity. They might be expected to demonstrate the highest levels of transparency and to be leading in implementing new approaches to corporate reporting.

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## DEVELOPING AN INSTRUMENT FOR MEASURING BANKING SERVICE QUALITY

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### ABSTRACT

*The purpose of this paper is to develop an instrument for measuring service quality in the Macedonian retail banking sector by adapting and refining previously developed generic instruments, supplemented by items generated in a qualitative analysis. Actually, this research is an attempt to overcome the identified disadvantages of the generic SERVQUAL instrument, and to develop a more reliable and more valid instrument for measuring retail banking service quality in Macedonia. For that purpose, the perceptions section of the SERVQUAL scale, i.e. SERVPERF scale was adapted and refined for measuring the functional aspects of service quality and the instrument proposed by Lassar et al. (2000) was used for measuring the technical aspects of service quality. New items in the inventory were added as a result of the conducted qualitative analysis, identifying the specific aspects of the industry and country context. Further, factor analysis was conducted for data reduction and for refining the generated inventory of items. The sample consisted of 208 private clients of banks in Macedonia. Inventory refinement resulted in a reliable and valid instrument for measuring Macedonian banking service quality, encompassing both functional and technical aspects of service quality. Additionally, the conducted analysis identified three dimensions of service quality in the banking sector of Macedonia: reliability/responsiveness, tangibles and price. The developed instrument would be of great importance in fulfilling the sectorial and cultural gap in understanding and measuring service quality. Additionally, this research would be of great managerial and academic importance as a basis for further research and measurement of service quality in the banking sector in Macedonia.*

**Keywords:** *dimensions, factor analysis, instrument, service quality, retail banking*

### 1. INTRODUCTION

Conceptualization and measurement of service quality are the most controversial and the most researched topics in the service marketing literature (Brady and Cronin, 2001). Many researchers have tried to define service quality concept, considering its different aspects (Lehtinen and Lehtinen, 1991; Parasuraman et al., 1988, 1985; Grönroos, 1984). Traditionally, service quality theory is derived from the product quality literature (Juran, 1988) and customer satisfaction literature, i.e. expectancy-disconfirmation paradigm (Oliver, 1980). Although service quality is a complex and interdisciplinary concept, researchers have achieved consensus that it should be defined and measured from a customer perspective (Golder et al., 2012). Service quality is a mean for differentiation and the most competitive “weapon” of service organizations (Berry et al., 1988). In the banking sector, product homogeneity have resulted in evolving service quality as a crucial element in competitors’ strategies of banks (Avkiran, 1994). Customers evaluate bank performances mostly based on the personal contact and interactions with employees (Grönroos, 1990). Delivering high level of service quality enables financial institutions to fulfill some crucial requirements for achieving successful performances, such as customer satisfaction and loyalty, market share, financial performance and profitability (Cui et al., 2003). Based on this and even more because there is a lack of contribution in understanding service quality in the banking sector, investigating service quality in this sector



is very essential (Awan et al., 2011). Besides the strategic role of the banking sector in each national economy and the important role of service quality in creating a bank's success (Wang et al., 2003), studies in this area have not provided significant conceptual and methodological contributions in measuring service quality. Generally, there is a lack of standardized and publicly available instruments for measuring perceived quality of banking services (Bahia and Nantel, 2000). In most of the cases, researchers use generic methods and models for measuring service quality, using them originally or adapting them to the service (banking sector) and specific cultural context. The widest empirical application has SERVQUAL model (Parasuraman et al., 1988, 1985) with its generic scale for measuring service quality which is consisted of 22 pairs of items referring to customers' expectations and perceptions about different aspects of service quality. Only a few studies provide new models and approaches for measuring service quality in banking (Yavas et al., 2004). Besides the industry lacuna, there is also a cultural lacuna in measuring service quality. Namely, most of the studies are conducted in developed economies and especially in Western cultural context (Herbig and Genestre, 1996). Therefore, researching service quality in the context of Macedonian banking would be of great importance for fulfilling this research gap and also for suggesting appropriate service quality strategies to bank managers of Macedonian and international banks. Although SERVQUAL is the most used instrument for measuring service quality (in general, as well as in the banking sector), there are some critics referring to the proposed conceptualization and operationalization of service quality. First, some researchers (Cronin and Taylor, 1994, 1992; Teas, 1993) criticize SERVQUAL scale regarding customer expectation conceptualization and about using the differences between perceptions and expectations as a service quality measurement. Additionally, psychometric characteristics of the scale are doubted, i.e. the reliability and validity of the scale (Ladhari, 2008; Buttle, 1996; Cronin and Taylor, 1994, 1992; Teas, 1993). Some studies (Page and Spreng, 2002; Dabholkar et al., 2000; Brown et al., 1993; Cronin and Taylor, 1992; Babakus and Boller, 1992) revealed that service quality measurement based only on perceptions has higher explanation power compared to disconfirmation of perceptions and expectations approach. Based on this, SERVPERF scale is developed by Cronin and Taylor (1992), measuring only customers' perceptions of service quality. Second, there is inconsistency in the service quality dimensions identified in different studies, i.e. service quality dimensions and their importance vary regarding service and cultural context (Ladhari et al., 2011; Ladhari, 2008; Dabholkar et al., 2000; Bahia and Nantel, 2000; Carman, 1990). Third, some authors argue that SERVQUAL is focused only on service delivery process, i.e. on the functional dimension of service quality, ignoring the technical dimension (Ladhari, 2008; Kang, 2006; Kang and James, 2004; Buttle, 1996; Grönroos, 1990). Based on these elaborations, this research is an attempt to overcome the elaborated disadvantages of the SERVQUAL instrument, and to develop a more reliable and more valid instrument for measuring Macedonian retail banking service quality. The instrument is developed in a five-step research process presented in the methodology and results sections. Before that, a literature review regarding the analyzed topic is presented. Conclusions are presented in the final section of the paper.

## 2. LITERATURE REVIEW

Generally, most of the studies researching service quality are based on two models which set the basis of conceptualization and measurement of service quality:

- Grönroos' model – Nordic school (Grönroos, 1984)
- Gap model (SERVQUAL) – American school (Parasuraman et al., 1985, 1988).

There is no consensus in the literature regarding which model is more adequate in conceptualization of service quality, but SERVQUAL model has dominant application in the

empirical studies of service quality. Actually, Grönroos' model offers only theoretical frame which conceptualize service quality through technical and functional dimension. On the other hand, Parasuraman et al. (1985, 1988) managed to develop a measurement instrument (SERVQUAL scale) consisted of 22 pair of items (expectations and perceptions), grouped in five dimensions. Parasuraman et al. (1985) initially identified ten dimensions of service quality. After the conducted successive analyses (correlation and factor analysis), the identified service quality dimensions were modified and SERVQUAL scale was created with five identified dimensions (Parasuraman et al., 1988). The finally proposed SERVQUAL dimensions were (Parasuraman et al., 1988, p.23): tangibles (physical capacities, equipment and personnel appearance); reliability (capability for consistent and accurate performing of the promised service); responsiveness (readiness to help the customers and to deliver prompt service); assurance (employees' knowledge and courtesy, as well as capability to instill confidence and assurance); empathy (care and individual attention to the customers). Tangibles and reliability are referring to the company image and effectiveness in general, while the other three dimensions have personal component because they reflect employees' attitudes and behavior. Although the five SERVQUAL dimensions are conceptually different aspects of service quality, they are mutually connected. Although the American perspective is dominant in the literature, so far there has not been achieved consensus which approach is more appropriate (Brady and Cronin, 2001). It is generally accepted that service quality is a multidimensional concept (Kang and James, 2004; Cronin and Taylor, 1992; Grönroos, 1990; Parasuraman et al., 1988, 1985), but researchers do not agree about the nature and the content of the underlying dimensions of this concept. The difficulty in identifying the generic dimensions of service quality lies in the fact that service quality dimensions are determined by the specific service sector (Babakus and Boller, 1992). Grönroos (1984, p. 38), as a representative of the Nordic school, identified two dimensions of service quality: functional quality (defines customer perceptions about the interactions which take place during the service delivery, i.e. refers to the way a service is delivered, i.e.) and technical quality (reflects the output of service delivery, i.e. what the customer have after the service contact). Additionally, Grönroos (1982) describes image as a general perception of customers about service provider and it is involved as a filter between the previously identified dimensions. Similarly, Lehtinen and Lehtinen (1991) suggest three dimensions of service quality: physical quality, interactive quality and corporate quality. They indicate that service quality dimensions should be identified by incorporating the quality of the process and the quality of the output. Comparing different dimensions proposed by different researchers, it could be concluded that technical quality of Grönroos (1984) is similar to the physical dimension of Lehtinen and Lehtinen (1991) and reliability of Parasuraman et al. (1988); while the functional quality corresponds to the interactive dimension of Lehtinen and Lehtinen (1991) as well as to the other four dimensions proposed by Parasuraman et al. (1988) (tangibles, responsiveness, assurance and empathy). Besides this analogy, some authors consider that SERVQUAL is focused only on the process of service delivery (functional dimension), ignoring the technical dimension of service quality (Ladhari, 2008; Kang, 2006; Kang and James, 2004; Buttle, 1996; Grönroos, 1990). On the other side, the Nordic model is criticized for not incorporating the physical aspect of service environment which corresponds to "tangibles" from the SERVQUAL model (Pollack, 2009). Additionally, the main limitation of the Nordic concept of service quality is that it is relatively difficult to define the technical quality or the output of some services (Kang and James, 2004). In order to overcome the disadvantages of these two perspectives (Nordic and American), some researchers offer additions, modifications or completely new conceptualization and operationalization of service quality. Lately, there are attempts for developing models which would be a combination of this two basic models and which would overcome their disadvantages (Kang and James, 2006; Brady and Cronin, 2001).

## 2.1. Service quality in the banking sector

Studies of service quality in the banking sector could generally be categorized in three groups: studies which have created specific instrument for service quality measurement in the banking sector (more appropriate than the generic instruments); studies which have applied SERVQUAL model and studies which have been based on SERVPERF model. The most widely used instrument for measuring banking service quality is SERVQUAL which is a generic instrument for measuring service quality. In table 1 are presented studies which have created specific instrument for measuring service quality in banking.

*Table 1: Specific instruments for measuring service quality dimensions in the banking sector (Authors' review)*

No.	Author/s (Year)	Methodology/Model	Developed Instrument, Sample	Dimensions	Country
1	Avkiran (1994)	Based on the SERVQUAL scale; the difference between perceptions and expectations is calculated	BANKSERV instrument (17 items); 622 respondents	4 dimensions: 1) staff conduct; 2) credibility; 3) communication; 4) access to teller services	Australia
2	Bahia and Nantel (2000)	SERVQUAL items are combined with additional items derived from the marketing mix frame; customers perceptions and expectations are measured	BSQ (Banking Service Quality) instrument (31 items); 300 respondents	6 dimensions: 1) effectiveness and assurance; 2) access; 3) price; 4) tangibles; 5) service portfolio; 6) reliability	Canada
3	Aldlaigan and Buttle (2002)	Qualitative research is conducted and quantitative research which is based on the Grönroos' conceptualization; only perceptions are measured	SYSTRA-SQ instrument (21 items); 975 respondents	4 dimensions: 1) service system quality (SSQ); 2) behavior SQ (BSQ); 3) machine SQ (MSQ); 4) service transactional accuracy (STA)	Great Britain
4	Othman and Owen (2001)	Based on the SERVQUAL scale; the difference between perceptions and expectations is calculated	CARTER instrument (34 items); 360 respondents	6 dimensions: 1) compliance; 2) assurance; 3) reliability; 4) tangibles; 5) empathy; 6) responsiveness	Kuwait
5	Guo, et al. (2008)	Based on the SERVQUAL (15 items were used from the original 22), supplemented with items generated from the qualitative research; difference between perceptions and expectations is calculated	CBSQ (Chinese banking service quality) instrument (20 pairs of items); 259 respondents	2 dimensions on higher level: 1) functional (reliability and human capital) and 2) technical quality (technology and communication)	China
6	Abdullah et al. (2011)	The instrument is developed based on the literature review and conducted qualitative research; only customer perceptions are measured	BSQ index (Index of banking service quality) (29 items); 1.519 respondents	3 dimensions: 1) systematization of service delivery; 2) employees' responsiveness; 3) reliable communication	Malaysia

Based on the previously elaborated it could be concluded that most of the presented studies are based on SERVQUAL, except for BSQ index and SYSTRA-SQ scale which are based on Grönroos' model. Most of the service quality dimensions which are identified in the alternative instruments are similar to SERVQUAL dimensions.

### 3. METHODOLOGY

The present research was conducted in five stages. First, the validity and predictive power of SERVQUAL and SERVPERF scale was tested on a sample of 119 respondents. Second, the five-dimensional SERVQUAL structure was tested in the case of the Macedonian banking sector, by using the alternative SERVPERF scale, i.e. the respondents reported their level of agreement regarding the 22 items of perceptions section of the SERVQUAL scale. The study comprised of 198 respondents. Third, a qualitative analysis was conducted, as a basis for generating additional items. The critical incident technique was used in order to obtain an in-depth knowledge of the customer perceptions of bank service quality (55 respondents) and of the different aspects generating customer satisfaction and dissatisfaction. Additionally, interviews with bank managers were conducted (7 interviews), in order to identify their perceptions regarding different aspects of service delivery process. Fourth, the new inventory was developed based on the results of the previous research stages. Finally, exploratory factor analysis (EFA) was applied for data reduction and scale refining.

#### 3.1 Sample

The main research in this study comprises only retail users of banking services in Macedonia, avoiding the corporate clients. The population is comprised of all adults (above 18 years) which are users of banking services in Macedonia. The questionnaire was distributed to 300 respondents and the response rate was relatively high (68%) as a result of the applied personal interview. After the conducted data screening, the effective number of responses is 208. The sample size is above the recommended minimum level for conducting analyzes. Namely, for conducting EFA it is suggested to be used minimum of 100 respondents (Hair et al., 2006).

### 4. RESULTS

1) The results of the first stage suggested that the SERVPERF scale has a higher level of convergent validity and greater power of predicting the total service quality. As was mentioned before, the final inventory comprised only the perception items of the SERVQUAL scale, i.e. SERVPERF scale (FQ1 to FQ22) (see in Parasuraman et al., 1988) because the conducted testing and comparison of the two scales suggested the following:

- SERVPERF scale has higher level of convergent validity (this is measured by the level of correlation with the general service quality which is higher with the SERVPERF measures (0.793) than with the SERVQUAL measures (0.619);
- SERVPERF scale has higher level of predictive power of the general service quality (the adjusted coefficient of determination ( $R^2$ ) is significantly higher when perceptions are independent variables in the model (0.6132) than when the differences between perceptions and expectations is used ( $R^2=0.431$ );
- SERVPERF scale has higher level of efficacy (with avoiding the expectations section, the number of items is halved).

2) In the second stage, the conducted factor analysis did not confirm the five-dimensional SERVQUAL structure. The obtained results suggested two dimensions of service quality in the banking sector in R. Macedonia: reliability/responsiveness and tangibles, measured by 10 items. These items were used as basis for developing the new inventory.

3) The qualitative analysis generated two additional items referring to customer perceptions of banking service quality.

- The employees in my bank have high level of knowledge of bank products and they explain them using clear language understandable for the clients (clear, precise, unambiguous) (FQ23);
- The employees in my bank provide additional information even for the aspects which are out of the domain of their job position (FQ24).

4) As was mentioned before, the new inventory consisted of 22 items: for measuring the functional service quality were used the retained 10 SERVPERF items and the two items generated by the qualitative analyses; while for measuring the technical service quality were included 10 items adapted from the instrument of Lassar et al. (2000) (TQ1 to TQ10). The conducted analyses in the final stage are presented below. In order to conduct the planned adjustment of the SERVQUAL/SERVPERF scale for measuring banking service quality in Macedonia, several consecutive exploratory factor analyzes were conducted. Principal axis factor method for extraction was used with Varimax rotation. In all the repetitions of the factor analysis, statistical adequacy tests were on a satisfactory level (although in the first attempt the rotation matrix generated only one factor). In the iterative process, “problematic” variables were excluded, based on certain criteria. Namely, potentially “problematic” variables are those which have low level of communality (below 0.4) and those which overlap in two or more factors (have high level of factor loading (0.4 or above) at more than one factor) (Hair et al., 2006). The exploratory factor analysis was repeated until all the “problematic” variables were excluded. The results of the first EFA indicated that the item FQ24 has low level of communalities (0.395) and therefore this item was excluded from the further analyses. In the second iteration, the rotation factor matrix identified four factors which were more distinctive, although there was certain overlapping. Actually, after the second iteration, five items were excluded (FQ9, TQ3, FQ12, TQ8, TQ9 and TQ10 because of the overlapping. After the third iteration, three items were excluded (TQ1, TQ2, TQ4) because of the low level of communalities (0.328, 0.335 and 0.392, respectively).

The final iteration of EFA provided appropriate level of “communalities” of the analyzed variables and three clearly distinguished factors without overlapping. All the significance tests are adequate (table 2) and the three identified factors explain 58.592% of the total variance.

*Table 2: KMO and Bartlett's Test (Authors' calculations)*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.895
Bartlett's Test of Sphericity	Approx. Chi-Square	1408.302
	df	78
	Sig.	.000

In the table 3 “communalities” of the retained variables are demonstrated and all the values are higher than 0.4. Also, in table 3 the rotated factor matrix is presented and the appropriate factor loadings of the variables. All the factor loadings of the appropriate factor are higher than 0.4 and there are not overlapping among the factors.

*Table following on the next page*

Table 3: Rotated factor matrix (Authors' calculations)

	Communalities	Factor (58.592%)		
		1	2	3
FQ1: My bank has modern looking equipment.	.522			.680
FQ2: My bank's physical facilities are visually appealing.	.630			.704
FQ3: My bank's reception desk employees are neat appearing.	.527			.575
FQ6: When you have a problem, my bank shows a sincere interest in solving it.	.683	.775		
FQ7: My bank performs the service right the first time.	.555	.716		
FQ8: My bank provides its service at the time it promises to do so.	.540	.674		
FQ11: Employees in my bank give you prompt service.	.650	.744		
FQ13: Employees in my bank are never too busy to respond to your request.	.601	.692		
FQ18: Employees of excellent banks will have the knowledge to answer customers' questions.	.592	.663		
FQ23: The employees in my bank have high level of knowledge of bank products and they explain them using clear language understandable for the clients.	.493	.658		
TQ5: The costs of services in my bank are acceptable and appropriate.	.709		.805	
TQ6: My bank has favorable interest rates of credit and deposit products.	.707		.820	
TQ7: My bank regularly informs me about the calculated interest of my products.	.408		.548	
Extraction Method: Principal Axis Factoring.				
Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

The first factor comprises 7 variables and mostly is a combination of "reliability" and "responsiveness", while only one item retains from the factor "assurance". The second factor is referred to the dimension "tangibles", retaining three of the original four dimensions. In the purification process, all the variables referring to the original dimension "empathy" were excluded. The third factor is "price" which refers to the technical aspects of service quality. In order to assess the internal consistency of the two sub-scales, the Cronbach's Alpha coefficient is calculated.

Table 4: Reliability test (Authors' calculations)

Factors	Cronbach's Alpha	Number of items
Factor 1	.906	7
Factor 2	.776	3
Factor 3	.796	3

The obtained values are higher from the recommended minimum level (0.70) and are a confirmation of the reliability.

## 5. CONCLUSION

In the previous analysis an instrument was developed for measuring service quality in the banking sector in Macedonia which is more valid measure than the generic instruments for measuring functional and technical service quality. This is the main contribution of this study,

especially because the identified disadvantages of the SERVQUAL instrument are overcome. The developed instrument is specific for the banking sector in the context of Macedonia. It consists of 13 items, structured in three dimensions. Ten items refer to the functional service quality (9 of them are adapted from the SERVQUAL scale) and are structured in two dimensions (reliability/responsiveness and tangibles) while the other three items are referring to the pricing aspects of the technical service quality. The dimension "tangibles" refers to the physical capacities and equipment of the bank, as well as the employees' appearance. Only this dimension from the original five SERVQUAL dimensions is clearly differentiated as a separate dimension. The identified dimension reliability/responsiveness presents a combination of the two separate SERVQUAL dimensions and refers to the bank responsiveness to deliver accurate and effective service, reflecting the employees' behavior. The dimension price was distinguished as a separate and refers to the technical service quality, explaining the pricing policy of the bank, the interest rate level and the regular reporting about these aspects. The obtained results are in line with the previous studies which demonstrate that there is inconsistency in identified dimensions. Actually, the obtained service quality dimensions in the Macedonian banking sector are in line with most of the studies applying SERVPERF scale which usually confirm "tangibles" (Culiberg and Rojšek, 2010; Manimaran, 2010; Wang et al., 2003), "reliability" (Culiberg and Rojšek, 2010; Manimaran, 2010; Athanassopoulos et al., 2001) and "responsiveness" (Manimaran, 2010; Wang et al., 2003;). In this study, "reliability" and "responsiveness" are merged in one dimension, while "assurance" and "empathy" are not retained, as in the previously mentioned studies. The "price" dimension is the only retained dimension of technical service quality which was also identified in the study of Lassar et al. (2000). The main limitation of this study is the sample which is not representative. Additionally, the sample is limited because it comprises only retail users of banking service. In future studies corporate users of banking services should be also included. Beside these limitations, the obtained results and the developed instrument would be of great importance for further empirical studies focused on measuring service quality in the banking sector in Macedonia. Additionally, further studies should be focused on the relationships of service quality and its effects on customer satisfaction, customer loyalty, customer retention, as well as financial performances.

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## INFLUENCE OF EBITDA MARGIN ON CREDIT WORTHINESS ESTIMATION

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### **ABSTRACT**

*The aim of this paper is to investigate the influence of EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) on estimation of credit worthiness. Starting point of estimating credit worthiness is analysis of historic information through analysis of financial statements and ratio analysis, but most important process is estimating available and sustainable cash flow considering that loans can be repaid solely from cash. Given that DSCR (Debt Service Coverage Ratio) uses EBITDA as proxy for available cash flow author focused on influence of EBITDA as predictor variable. Theory and practice uses different models, different ratios and their combination for the purpose of estimating credit worthiness of the company. The paper gives overview of several existing credit rating models pointing out influence of used variables on the final model outcome. In this paper the author wanted to test her assumption that one variable EBITDA margin, measured as EBITDA/revenues, has significantly higher impact on estimation result than all other considered variables. Such presumption is generated from practical experience of the author, while in this paper assumption is tested with statistical methods. The paper includes credit worthiness prediction model developed by the author. For the purpose of this paper credit worthiness is measured as 30 days delay in loan repayment, meaning that companies which are in delay with their loan obligations longer than 30 days have deteriorated credit worthiness and increased credit risk. Model is developed using data provided by one commercial Croatian bank on the sample which includes 354 companies in Croatia. Developed model has 81,4% accuracy of prediction and the most influential variable proved to be EBITDA margin.*

**Keywords:** *credit rating model, credit risk, credit worthiness, EBITDA, sustainable cash flow*

### **1. INTRODUCTION**

Credit risk management is one of the key goals in bank operations and successful management of credit risk is directly related with banks performance. Core process within credit risk management is estimation of credit worthiness. Estimating credit worthiness is key process preceding actual financing, but is also present during entire life time of the loan considering that bank needs to continuously monitor and estimate credit risk in order to manage it adequately. Through time authors developed large number of models used for estimating credit rating and predicating bankruptcy, insolvency or failure, all of which have the aim to manage credit risk better. Those models use number of single ratios or group of ratios. First statistical credit rating model was developed by W.Beaver in 1967. This model showed that these 3 variables are most adequate for predicting failure:

- 1.) cash flow / total assets
- 2.) revenue / total debt
- 3.) cash flow / total debt

Altman's models are more complexed and his original Z-score was introduced on 1968. In 1993 Altman introduced revised Z'-score and as a result of multiple discrimination analysis Altman's Z'-score included those ratios:

- 1.) net working capital / total assets (X1)
- 2.) retained profit / total assets (X2)

- 3.) profit / total assets (X3)
- 4.) book value of own capital / book value of total financing sources (X4)
- 5.) sales / total assets (X5)

Each ratio has different weighing factor, where it is evident that profitability ratios bring higher influence to final result:

$$\text{Altman } Z' = 0,012X1 + 0,014X2 + 0,033X3 + 0,006X4 + 0,999X5$$

Altman, Haldeman and Narayanan created ZETA model which estimates the chances of a public company going bankrupt within a two-year time period. The model is based on following ratios:

- 1.) ROA (profit /total assets)
- 2.) stability of earnings
- 3.) profit / total paid interests
- 4.) retained profit / total assets
- 5.) total current assets / total short term
- 6.) own capital / total capital
- 7.) company size measured with total assets

The most significant variable in the model is ratio of retained profit to total assets.

Šarlija, Harc and Penavin created a model used to predict liquidity problems and insolvency for companies in Croatia. Model is based on following variables:

- 1.) Industry
- 2.) Geographic area (district)
- 3.) Liquidity - current ratio
- 4.) Liquidity – net working capital
- 5.) Liquidity – current assets / total assets
- 6.) Leverage – indebtedness factor
- 7.) Leverage – coverage ratio
- 8.) Leverage – debt to equity
- 9.) Leverage – interest coverage
- 10.) Efficiency – total assets turnover
- 11.) Efficiency – current assets turnover
- 12.) Efficiency – account payable days
- 13.) Efficiency – accounts receivable days
- 14.) Efficiency – days sales of inventory
- 15.) Economy – economy of total activities
- 16.) Economy – economy of operating activities
- 17.) Economy – economy of financial activities
- 18.) Profitability – net profit margin

As seen in above presented overview of existing models, profitability is detected to be influential variable, however none of those models used EBITDA as variable, but rather opted for net profit or retained profit. Starting point of estimating credit worthiness is analysis of historic information through analysis of financial statements and ratio analysis, but most important process is estimating available and sustainable cash flow considering that loans can be repaid solely from cash. The debt service coverage ratio (DSCR) is a financial ratio that measures the company's ability to pay their debts. In broad terms the DSCR is defined as the cash flow of the company divided by the total debt service. Jurčić (2005) explains that Debt service coverage ratio (DSCR) can be calculated as ratio between EBITDA and sum of interest and principles, which is in accordance with other theory definitions. Following the definition,

it is obvious that debt servicing capacity lies with EBITDA. According to Basu and Rolfes (1995) available cash flow is most often calculated as sum of corrected EBITDA and depreciation/amortization, where corrected EBITDA implies elimination of all non-cash positions. Following this, sustainable cash flow can be estimated using average EBITDA or expected EBITDA as a main source of sustainable cash flow. According to Moody's Investors Service (2014), EBITDA is an important and broadly accepted tool in evaluating a company's credit risk, although no single measure is sufficient by itself as an indicator for impending credit stress. EBITDA does not capture key items that affect cash flow such as interest, taxes, working capital and capital expenditures, so Moody's utilizes a number of financial ratios, including measures of cash flow from operations and free cash flow, to comprehensively assess credit quality. Considering that EBITDA is starting point for calculating sustainable cash flow or DSCR the author in this paper wanted to focus on relative significance of EBITDA margin when compared to other prediction variables in model which aims to predict problems with solvency, i.e. significant decrease of credit worthiness. In this paper decrease of credit worthiness resulting in problems with solvency is determined as delay in loan repayment over 30 days. The rest of the paper is structured as follows. After the introduction, review of the literature dealing with this issue follows. Description of variables is given in section three, while section four describes methodology and empirical findings. The paper concludes with concluding remarks.

## **2. LITERATURE REVIEW**

Roje (2005) in her paper "The Role of Accounting Determinants in Predicting Long Term Credit Ratings" presents a model based on accounting variables that were anticipated to predict S&P long-term credit ratings quite well. The model constructed shows the relative importance of different financial ratios in determining credit ratings. Second scope of the paper was to further simplify the constructed model by extracting factors considered as the most important for credit analysts in their credit assessment decisions. Regarding relative importance of the variables the paper shows that most important variables are size measured as market value of equity and profitability. Cruz de Souza Murcia, Dal-Ri Murcia, Rover, Borba (2014) in their paper analysed the determinants of credit rating in Brazil. The paper showed that leverage and internationalization are significant at the 1% level in explaining credit rating, performance in the financial market was significant at a 5% level, while profitability and growth were significant at a 10% significance level. Hilscher and Wilson (2011) in their paper investigate the information in corporate credit ratings. They examined the extent to which company's credit ratings measure raw probability of default as opposed to systematic risk of default, a company's tendency to default in bad times. The paper revealed that credit ratings are dominated as predictors of corporate failure by a simple model based on publicly available accounting financial information, indicating that ratings are poor measures of raw default probability as they fail to capture the considerable variation in default probabilities and empirical failure rate over the business cycle. Jacobs, Karagozoglu, Peluso (2010) in their paper „Measuring Credit Risk: CDS Spreads vs. Credit Ratings“ investigated the relationship between CDS (credit default swap) spreads and credit ratings to help explain how market participants perceive and price credit risk. CDS spreads theoretically represent the amount of compensation demanded for taking on pure credit risk of the underlying reference entity. As noted before by Callen, Livnat and Segal (2007) although CDS premium is related to credit ratings by rating agencies, there is quite a variation in CDS spreads that are observed for firms with a given rating. This paper confirmed those finds. Also, Marian Micu, Eli Remolona and Philip Wooldridge (2006) find that more often than not CDS price changes occur prior to rating announcements and this paper indicate similar results.

Minardi (2007) in the paper „A Methodology for Estimating Credit Ratings and the Cost of Debt for Business Units and Privately held Companies“ developed a methodology for estimating the market cost of debt for business units and privately-held companies. The most significant variables in explaining ratings were size (ln(assets)), financial leverage (debt/total assets), ROA (net income/ total assets) and volatility. Standard&Poors's (2016) defines issuer credit rating as a forward-looking opinion about the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program (including ratings on medium-term note programs and commercial paper programs). It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated. The opinion reflects S&P Global Ratings' view of the obligor's capacity and willingness to meet its financial commitments as they come due, and may assess terms, such as collateral security and subordination, which could affect ultimate payment in the event of default. Moody's investor service (2017) defines that ratings assigned on Moody's global long-term and short-term rating scales are forward-looking opinions of the relative credit risks of financial obligations issued by non-financial corporates, financial institutions, structured finance vehicles, project finance vehicles, and public sector entities.

### 3. SELECTION OF VARIABLES

As previously described various ratios of liquidity, indebtedness, profitability and activity are often used in credit rating or prediction models. In this paper following variables are chosen based on practical experience of the author. Short description of variables, i.e. the way of their calculation is shown in Table 1 together with expected sign of that variable on performance.

*Table 1: Description of Variables (compiled by author)*

	<b>Variable description</b>	<b>Expected sign</b>
<b>Dependent variable</b>	Delay over 30 days	
<b>Independent variables</b>	<b>debt / total assets (DA)</b> - shows what portion of total assets is financed with debt	+
	<b>current assets / current liabilities (CR)</b> – shows liquidity of the company in term of whether it has sufficient current liquid assets to cover current liabilities	-
	<b>net working capital / total liabilities (NWCL)</b> - shows the portion of NWC in total liabilities	-
	<b>EBITDA / revenues (EBITDAM)</b> – this ratio is EBITDA margin, showing operating profitability	-
	<b>OCF / revenues (OCFR)</b> –shows portion of Operating Cash Flow to revenues	-
	<b>accounts payable days (APD)</b> – shows average days it takes to pay suppliers	+
	<b>accounts receivables days (ARD)</b> – shows average days it takes to collect receivables	+
	<b>days sale of inventory (DSI)</b> - shows average days of inventory turnover	+
	<b>cash gap (CG)</b> – shows days gap between accounts payable days and operating cycle days (ARD + DSI)	+
	<b>OCF / interests+debt (OCFC)</b> – shows OCF coverage of debt including interests expenses	-

#### 4. METHODOLOGY AND EMPIRICAL FINDINGS

The initial sample consists of all corporate clients of one Croatian bank. There are 2.839 clients. In order to gain adequate sample and eliminate probability of error, sample is reduced using these barriers:

1. Available financial statements for two years – this barrier eliminates newly founded companies since they would disrupt the sample
2. Exposure in the Bank over EUR 200 ths – since model aims to predict credit worthiness, i.e. regular loan repayment it is necessary that all companies in the sample have significant loan exposure
3. Sales revenues >0 – this barrier eliminates SPVs and all companies that have no regular activities since they would significantly disrupt the sample.

Using those barriers sample is reduced to 354 companies. Structure of the sample shows that 154 companies don't have delay over 30 days, while 200 companies have delay over 30 days. While building a model data was processed in SPSS and MS Excel. Descriptive statistics for all variables is shown in the Table 2.

*Table 2: Descriptive statistics (compiled by author)*

		DA	CR	NWCL	EBITDAM	OCFR	APD	ARD	DSI	SG	OCFC
N	Valid	354,00	354,00	354,00	354,00	354,00	354,00	354,00	354,00	354,00	354,00
	Missing	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Std. Deviation		0,37	3,61	1,57	1,89	14,77	132.353,55	6.830,05	306.792,74	289.253,40	1.329,08
Variance		0,13	13,01	2,45	3,58	218,02	>17.517 mil	>46 mil	>94.121 mil	>83.667 mil	>1.7 mil
Skewness		4,34	8,25	9,30	-9,17	12,55	16,19	15,92	11,52	-12,76	2,81
Std. Error of Skewness		0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13
Kurtosis		41,42	90,76	105,04	91,90	178,04	278,52	273,83	155,64	187,78	47,24
Std. Error of Kurtosis		0,26	0,26	0,26	0,26	0,26	0,26	0,26	0,26	0,26	0,26
Minimum		0,00	0,00	-0,94	-21,00	-56,88	0,00	0,00	0,00	-4.606.541	-11.351,00
Maximum		4,50	48,99	20,93	0,96	225,00	2.344.395	120.797,40	4.658.495,00	670.451,04	11.204,00

Before conducting regression analysis, collinearity among the independent variables has been checked to eliminate possible multicollinearity. Matrix of Pearson Correlation coefficients has shown that all independent variables had correlation much lower than 0.8 indicating that model based on the independent variables is free of multicollinearity.

*Table following on the next page*

Table 3: Correlations among selected independent variables (compiled by author)

		DA	CR	NWCL	EBITDAM	OCFR	APD	ARD	DSI	SG	OCFC
DA	Pearson Correlation	1	-0,005	-0,204	-0,061	0,114	0,047	0,140	0,075	-0,061	-0,124*
	Sig. (2-tailed)		0,918	0,000	0,250	0,031	0,379	0,008	0,160	0,251	0,020
	N	354	354	354	354	354	354	354	354	354	354
CR	Pearson Correlation	-0,005	1	0,499	0,059	-0,008	-0,017	-0,029	-0,007	0,001	0,176**
	Sig. (2-tailed)	0,918		0,000	0,268	0,881	0,747	0,589	0,890	0,991	0,001
	N	354	354	354	354	354	354	354	354	354	354
NWCL	Pearson Correlation	-0,204	0,499	1	0,055	-0,006	-0,015	-0,032	-0,014	0,009	0,255
	Sig. (2-tailed)	0,000	0,000		0,299	0,908	0,780	0,552	0,788	0,864	0,000
	N	354	354	354	354	354	354	354	354	354	354
EBITDAM	Pearson Correlation	-0,061	0,059	0,055	1	-0,396	-0,027	-0,177	-0,234	0,240	0,030
	Sig. (2-tailed)	0,250	0,268	0,299		0,000	0,615	0,001	0,000	0,000	0,569
	N	354	354	354	354	354	354	354	354	354	354
OCFR	Pearson Correlation	0,114	-0,008	-0,006	-0,396	1	0,043	0,485	0,297	-0,306	0,013
	Sig. (2-tailed)	0,031	0,881	0,908	0,000		0,415	0,000	0,000	0,000	0,808
	N	354	354	354	354	354	354	354	354	354	354
APD	Pearson Correlation	0,047	-0,017	-0,015	-0,027	0,043	1	0,040	0,345	0,090	0,010
	Sig. (2-tailed)	0,379	0,747	0,780	0,615	0,415		0,450	0,000	0,089	0,851
	N	354	354	354	354	354	354	354	354	354	354
ARD	Pearson Correlation	0,140	-0,029	-0,032	-0,177	0,485	0,040	1	0,022	-0,028	0,022
	Sig. (2-tailed)	0,008	0,589	0,552	0,001	0,000	0,450		0,685	0,598	0,687
	N	354	354	354	354	354	354	354	354	354	354
DSI	Pearson Correlation	0,075	-0,007	-0,014	-0,234	0,297	0,345	0,022	1	-0,903	-0,001
	Sig. (2-tailed)	0,160	0,890	0,788	0,000	0,000	0,000	0,685		0,000	0,986
	N	354	354	354	354	354	354	354	354	354	354
SG	Pearson Correlation	-0,061	0,001	0,009	0,240	-0,306	0,090	-0,028	-0,903	1	0,005
	Sig. (2-tailed)	0,251	0,991	0,864	0,000	0,000	0,089	0,598	0,000		0,924
	N	354	354	354	354	354	354	354	354	354	354
OCFC	Pearson Correlation	-0,124	0,176	0,255	0,030	0,013	0,010	0,022	-0,001	0,005	1
	Sig. (2-tailed)	0,020	0,001	0,000	0,569	0,808	0,851	0,687	0,986	0,924	
	N	354	354	354	354	354	354	354	354	354	354

\*. Correlation is significant at the 0.05 level (2-tailed).  
 \*\*. Correlation is significant at the 0.01 level (2-tailed).

In order to find statistically significant discriminators between financially distressed and non-distressed firms the T-test was used. T-test for equality of means for sample without delay and with delay determined significant variables as shown in Table 4.

Table 4: T-test for equality of means (compiled by author)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
DA	Equal variances assumed	4,037	0,045	-4,629	352	0,000	0	0	0	0
	Equal variances not assumed			-4,922	333,773	0,000	0	0	0	0
CR	Equal variances assumed	25,523	0,000	4,579	352	0,000	2	0	1	2
	Equal variances not assumed			4,068	165,001	0,000	2	0	1	3
NWCL	Equal variances assumed	18,771	0,000	4,949	352	0,000	1	0	0	1
	Equal variances not assumed			4,371	159,371	0,000	1	0	0	1
EBITDAM	Equal variances assumed	16,190	0,000	3,546	352	0,000	1	0	0	1
	Equal variances not assumed			4,035	202,643	0,000	1	0	0	1
OCFR	Equal variances assumed	6,562	0,011	-0,926	352	0,355	-1	2	-5	2
	Equal variances not assumed			-1,055	201,344	0,293	-1	1	-4	1
APD	Equal variances assumed	6,442	0,012	-1,336	352	0,182	-18,937	14,174	-46,812	8,939
	Equal variances not assumed			-1,523	199,437	0,129	-18,937	12,436	-43,460	5,586
ARD	Equal variances assumed	7,705	0,006	-1,647	352	0,101	-1,203	730	-2,639	234
	Equal variances not assumed			-1,877	199,026	0,062	-1,203	641	-2,466	61
DSI	Equal variances assumed	12,746	0,000	-1,823	352	0,069	-59,749	32,783	-124,224	4,726
	Equal variances not assumed			-2,071	205,550	0,040	-59,749	28,853	-116,635	-2,863
CG	Equal variances assumed	8,632	0,004	1,356	352	0,176	42,015	30,973	-18,901	102,931
	Equal variances not assumed			1,541	205,379	0,125	42,015	27,258	-11,727	95,757
OCFC	Equal variances assumed	22,526	0,000	4,144	352	0,000	577	139	303	851
	Equal variances not assumed			3,853	219,205	0,000	577,45	149,85	282,11	872,78

Statistical method used for analysis is binary logistic regression. Dependent variable is “delay over 30 days” and since it must be dichotomous it is coded binary with 0 or 1. Value 0

represents absence of the variable criteria, meaning the company has no delay over 30 days and 1 represents presence of variable criteria. Enter method is used for the selection of variables, meaning that all variables enter the model at the same time regardless of the fact if they fulfil criteria or not. Hosmer-Lemesh goodness-of-fit test shows that there is no significant difference between observed and predicted values of variables, i.e. data is well fitted.

Table 5: Hosmer and Lemeshow test (compiled by author)

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	21,378	8	0,006

Using described statistical methods, it is calculated that model has overall 81,4% accuracy. Prediction accuracy is higher for sample with existing variable criteria (delay over 30 days) amounting to 87% and 74% for the sample with absence of variable criteria.

Table 6: Prediction model results (compiled by author)

		Predicted			
		DELAY > 30 DAYS		Percentage Correct	
		0	1		
Step 1	Observed				
	DELAY > 30 DAYS	0	114	40	<b>74,0</b>
		1	26	174	<b>87,0</b>
	Overall Percentage				<b>81,4</b>

Considering that model has 81,4% accuracy of predicting delay we can conclude that selected variables are adequate. Statistical methods show influence of each variables as shown in the Table 7.

Table 7: Logistic regression summary for significant variables (compiled by author)

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	DA	1,903	0,619	9,450	1	0,002	6,703
	CR	-0,045	0,058	0,593	1	0,001	0,956
	NWCL	-1,870	0,427	19,215	1	0,000	0,154
	EBITDAM	-4,546	0,766	35,243	1	0,000	0,011
	OCFC	-0,001	0,000	9,912	1	0,002	0,999
	Constant	-0,049	0,296	0,028	1	0,868	0,952

Table 7 shows that only variable D/A (debt to total assets) has positive sign indicating that increase of debt increases the probability of financial distress. Other statistically significant variables (Current Ratio, NWC to Liabilities, EBITDA Margin and OCF Coverage) have negative signs indicating that the increase of these variables reduces the probability of financial distress. Signs of all variables are as expected. As presented in the table 6 the coefficient on profitability is negative showing that the higher profitability is associated with lower probability of delay, i.e. better credit worthiness. The magnitude of the coefficient indicates that it is the most influential variable.



## 5. CONCLUSION

Credit risk management is one of the key goals in bank operations and successful management of credit risk is directly related with banks performance. Through time authors developed large number of models used for estimating credit rating and predicating bankruptcy, insolvency or failure, all of which have the aim to manage credit risk better. Overview of existing models shows that profitability is detected to be very influential variable. The paper focuses on influence of EBITDA margin and whether this ratio has strong predictive power. This paper presented a model which has prediction accuracy of 81,4% meaning that used variables are adequate for predicting delay in loan repayment. Delay in loan repayment implies deterioration of credit worthiness and increase of credit risk. Statistical and empirical methods show that the presumption of the author was correct, showing that EBITDA margin has the most significant influence on prediction model of credit worthiness.

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## CONCEPTUAL FRAMEWORK FOR MANAGEMENT OF THE LIFE CYCLE COSTS OF BUILDINGS

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### **ABSTRACT**

*Life cycle costs of a building structures should be properly managed by companies that own and operate the building because the total costs are often very high. It is estimated that purchases of material alone represent approximately 60% of the total construction costs and, furthermore, as some structures have a limited lifetime, replacements of these structures must be taken into account as well. This paper aims to propose conceptual framework enabling detailed planning and monitoring of these costs in time. The presented framework deals with the entire life cycle of the structure, from the construction to its operation to the demolition at the end of its lifetime. Formulas enabling to estimate the individual life cycle cost items (such as construction costs, maintenance costs, repair costs and replacement costs) are proposed in order to facilitate business activities. The proposed framework has an ambition to be implemented in facility management software solutions and to be used by owners of residential buildings, office buildings or production facilities. Additionally, this solution may also be used to facilitate building life cycle costs estimation in public procurement, as a basis for estimating the environmental burden, or as a decision-making aid in selecting optimal material characteristics for newly constructed or renovated buildings.*

**Keywords:** *building, life cycle costs, maintenance, management, material*

### **1. INTRODUCTION**

Life cycle costs (LCC) are one of the indicators used to assess investment projects. LCC take into account the overall costs during the whole life cycle of a project. This article focuses on the construction sector and specifically on the life cycle costs of buildings. The life cycle of a building has four distinct phases – the pre-investment phase, investment phase, operation phase and demolition phase. Different costs are incurred in each of these phases; however, the most important are the investment and operation phases. In the investment phase, there are high costs incurred in a short period of time related to the construction of the building itself. Conversely, the operation phase is the longest period in the building's life cycle and the total costs in this phase often exceed the costs associated with the building's construction (Islam, 2015). LCC thus helps to select the best investment in terms of cost of implementation and operation if speaking about environmentally friendly solutions such as passive buildings (Kozik, 2017).

LCC are a useful indicator helping to find the optimum construction and material solution for the building, where the optimum solution means the most economical solution that meets the investor's requirements. LCC are assessed in the pre-investment phase where they can affect future costs the most (Ellingerová, 2011). Data obtained from LCC assessment can also be used in the building's operation phase by transferring them via a facility management software, where LCC can serve as the input for assessment of the funds required for repairs, replacements and maintenance in the building. An example of the proposed data flow for management and administration of a building was published at the WMCAUS 2017 conference (Bielek, 2017). This paper aims to propose a conceptual framework enabling detailed planning and monitoring

of structures' LCC, ranging from their construction to the subsequent operation and demolition at the end of their lifetime. This paper only considers the costs associated with structural design and excludes utilities and other costs.

## 2. BACKGROUND

There are multiple models used for calculating the LCC; however, the most common formula (also used in the European standard ISO 15686-5:2017, 2017) relies on discounting the costs associated with the building.

$$LCC = \sum_{t=0}^T \frac{c_t}{(1+r)^t}; \quad (1)$$

where:

$C_t$ ...all costs as equivalent cash flows in year  $t$ ;

$r$ ...discount rate;

$t$ ...analysed year ( $t=0, 1, 2, \dots, T$ );

$T$ ...length of the life cycle in years.

Three basic quantities enter into the above formula:

- The discount rate, which can have different values in different projects. The important thing for the investor is that the project's rate of return is comparable to other similar projects or requirements for specific types of public projects (the rate used for public projects in the Czech Republic is approx. 5 %) (Korytářová, 2015).
- The length of the examined period, which is based on the investor's requirements. This period may correspond to the overall building's lifetime, which is determined mainly by the selected construction solution (for example, a masonry house has an expected lifetime of 100 years (Kupilík, 1999)). Alternatively, the period may correspond to the time during which the investor intends to operate the building.
- The cash flow, which is based on the costs and returns of the given building.

To determine cash flow, Formula 1 must be split into individual costs. The first component of the formula consists in the acquisition costs, including the costs associated with the preparation of the project and the construction itself. Another part consists in the costs associated with the operation of the building – the replacement, repair and maintenance costs of the structure. The final cash flow component, i.e. the costs (or revenues) of demolition, come into play at the end of the building's lifetime. As each part of the building carries different acquisition and operation costs, it is necessary to divide the building into parts for which the individual costs can be best assessed. In this regard, it is suitable to use the so-called functional parts (FP) [8]. The division of a built structure into functional parts is similar to the division into construction parts found in TSKP (Czech Classification of Structural Components and Construction Works) (Kalivodová, 2006) however, construction parts (TSKP), as opposed to functional parts, are adapted to the nature and value of construction works, not to the structures themselves (Marková, 2011). A sample data structure for a functional part containing surfaces items is provided in Table 1.

*Table following on the next page*

*Table 1: Sample functional part with respect to surfaces items [8]*

Code	Functional part (FP)	Min. FP lifetime [years]	Max. FP lifetime [years]	Repair cycle [years]	Extent of repairs [%]
5110	Interior plaster	100	-	30	50
5120	Interior paint	5	15	-	100
5130	Interior tiling	20	80	20	10
5140	Exterior plaster, insulation	30	60	30	20

### 3. PROPOSED CONCEPTION OF BUILDING LCC MANAGEMENT

The proposed draft solution is divided into (1) costs associated with acquisition; (2) costs of repairs, replacement and maintenance; and (3) demolition costs.

#### 3.1. Acquisition costs

The pre-investment phase costs are the first component of the building's LCC. The acquisition costs are based on the building's itemised budget. The budget is divided into two parts, specifically the basic budget costs (BBC) and ancillary budget costs (ABC). All works and supplies of materials associated with the construction are included in the basic budget costs. In the Czech Republic, the basic budget costs are further divided into main construction works (MCW), associated construction works (ACW) and assembly works (M). Parts of MCW and ACW are used for the construction part; generally, MCW includes the building shell with walls and floors, while ACW includes specialised and finishing works. In this respect, it is necessary to determine which items belong to which functional part. For this work to be automated, it is necessary for each price database item to include an information on the functional part it belongs to. Generally, all items can be assigned to a functional part. There is a problem, however, with material transport, which is determined globally for a complete MCW part or for individual functional parts of ACW, respectively. It is determined as a sum of the weight of all the individual items in the given section. In MCW, material transport is the same for items such as foundations and vertical structures. This means that material transport cannot be assigned an information on the functional part it belongs to. On the contrary, material transport must necessarily be calculated for each functional part individually, where the weight is calculated based on the items assigned to the given functional part while the unit price is taken from the itemised budget. The acquisition costs are calculated based on the following relationship:

$$BBC = \sum_{i=1}^n P_i * Q_i + (\sum_{i=1}^n W_i * Q_i) * P_T \quad (2)$$

where:

BBC...basic budget costs

P<sub>i</sub>...unit price of functional part items

Q<sub>i</sub>...item quantity

W<sub>i</sub>...unit weight of functional part items

P<sub>T</sub>...unit price of material transport

Ancillary budget costs must be added to the basic budget costs. Ancillary budget costs are determined either as the direct price or as a percentage of the basic budget costs. They are generally divided into costs associated with project engineering (pre-investment phase costs), costs associated with the placement of the structure (all costs incurred by the construction contractor) and budget reserves. As LCC are determined in the pre-investment phase when the ancillary budget costs are not yet known, LCC are calculated as an increase of the selected base, i.e. the basic budget costs. Ancillary budget costs are calculated as follows:

Ancillary budget costs are calculated as follows:

$$ABC = BBC * \sum_{i=1}^n ABC_i \quad (3)$$

where:

ABC...ancillary budget costs

BBC...basic budget costs

ABC<sub>i</sub>...i-rate of ancillary budget costs

Total acquisition costs are determined on the basis of the following relationship:

$$C_{0i} = (\sum_{i=1}^n P_i * Q_i + (\sum_{i=1}^n W_i * Q_i) * P_T) * (1 + \sum_{i=1}^n ABC_i) \quad (4)$$

The above system for calculating the total costs is suitable for the pre-investment phase of a construction project where only approximate costs are known, both in terms of basic budget costs as well as ancillary budget costs. For the purposes of facility management, it is necessary to know the actual prices which are based on the budget proposed by the construction contractor. The system for calculating the basic budget costs in the investment phase of a project is similar to the pre-investment phase. As regards unit prices, the construction contractor's prices are used. Ancillary budget costs in this stage of the project are determined by the actual price, which for the purposes of LCC must be proportionally divided into functional parts according to the amount of costs.

### 3.2. Repairs, replacements and maintenance costs

The costs of repairs, replacements and maintenance of structures, i.e. functional parts, arising during the operation phase of the building constitute the second cost component in LCC calculation. This was already addressed in detail in the previous research stage (Biolek, 2017). A system was proposed that uses data entered by the facility manager into the software, from which the data are subsequently extracted and used as inputs in the calculation of LCC of the newly constructed building. Using data from existing buildings provides more accurate and up-to-date information, resulting in significantly more accurate LCC assessment. It should also be noted that reconstruction activities are followed with high level of uncertainty, e.g. in relation to cost estimation, especially on historical buildings (Radziszewska-Zielina et al., 2017).

### 3.3. Demolition costs

The third and final component of the LCC formula consists of the costs associated with the building's demolition. This phase occurs at the end of the building's lifetime in distant future (in terms of the overall life cycle length). From the budgeter's perspective, these costs can be assessed using two methods. In the first method, a budget can be drafted where the cost of demolition of each building structure is indicated separately. This would mean that each item aggregated in a functional part would have to include an information on which disassembly item is associated with it, for the purposes of assigning correct quantities (i.e. the scope of the works). Disassembly items include information on the weight of the rubble, which is essential for calculating rubble transport and landfill disposal fees. The second option is to consider the demolition of the building in its entirety, as opposed to calculating costs for all its individual structures separately. This means that functional parts do not need to be associated with disassembly items as required by the first method. The principle of the calculation is based on determining the built-up space of the whole building and multiplying it by the demolition price per cubic metre of the relevant building type as indicated in the price database. The rubble weight quantity is associated with the demolition item and the transport and landfill fees are calculated on its basis. While this method is not tied to functional parts, it is sufficient to

determine the approximate costs. Building demolition may result in costs as well as revenues. Revenues may accrue from the sale of certain types of raw materials such as metals, crushed brick, aggregate, etc. The issues related to recycling revenues are very complex. To give an example, revenues from crushed brick are influenced by many factors, such as whether the costs of sorting and crushing brick do not exceed the potential selling price. A building made primarily of steel structures could constitute a case where recycling would yield substantial revenues. In this case, the first method of calculating demolition costs should be applied since the weight of the steel structures should be determinable. In other cases, the second method of calculation is sufficient regardless of the revenues from demolition. The building demolition budget has the same requisites as the building acquisition budget. Similarly to acquisition, ancillary budget costs must be accounted for. Documentation must be prepared for each demolition and it is also necessary to account for the costs associated with preparing the demolition site and its operation.

### 3.4. Framework LCC calculation model

Based on the above list of costs incurred with respect to the building during its lifetime, the sample (1) can be elaborated on as follows:

$$LCC = C_{0i} + \sum_{t=0}^T \frac{RM_t}{(1+r)^t} + \sum_{t=0}^T \frac{R_t}{(1+r)^t} + \sum_{t=0}^T \frac{M_t}{(1+r)^t} + \frac{D}{(1+r)^T} \quad (8)$$

where:

$C_{0i}$ ...acquisition costs at a time  $t=0$ , including all designs, construction, fees and other costs related to the acquisition;

$RM_t$ ...cost of replacements as equivalent cash flow in year  $t$ ;

$R_t$ ...cost of repairs as equivalent cash flow in year  $t$ ;

$M_t$ ...cost of maintenance as equivalent cash flow in year  $t$ ;

$D$ ...costs and revenues associated with demolition;

$r$ ...discount rate;

$t$ ...analysed year based on the calculated cycle ( $t=0, 1, 2, \dots, T$ );

$T$ ...length of the life cycle in years.

Figure 1 shows the framework data flow for the LCC calculation. Firstly, building acquisition costs are transferred from the construction budget, including both the basic budget costs and the ancillary budget costs. The expected demolition costs are transferred in the same manner, using either the first or the second method (see subchapter 3.3). The costs of the operation stage of the building will be based on an already existing comparable building. These costs will then be used as input data for management and planning of replacements, repairs and maintenance.

*Figure following on the next page*

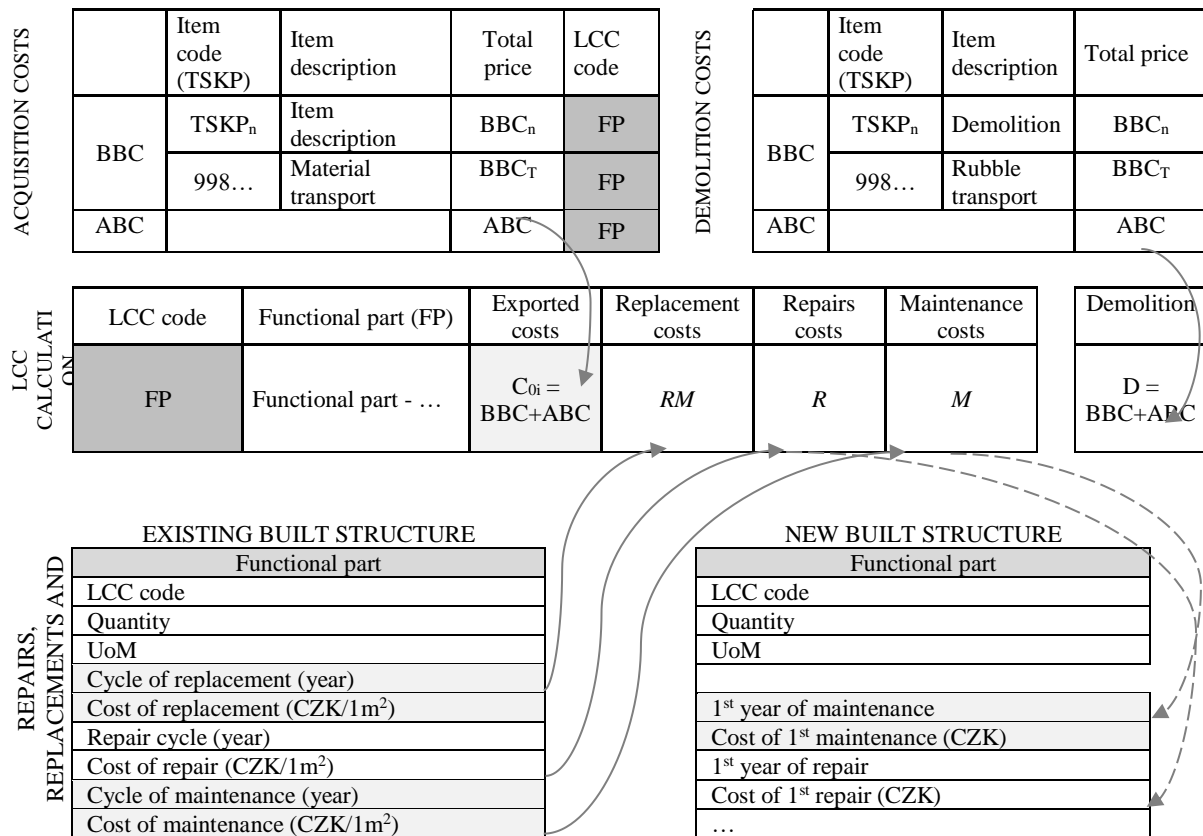


Figure 1: Proposed data flow for LCC calculation [drawn by the authors]

#### 4. CONCLUSION

Life cycle costs of a building serve not only as a method of assessing the efficiency of the investment but can also serve as the means to manage the building's costs during its entire lifetime. This paper aims to expand on the work done on LCC, specifically in terms of the newly proposed method of calculating and inputting the acquisition costs in functional parts and outlining the calculation of costs associated with the building's demolition at the end of its lifetime. In this regard, a general formula for calculating LCC was developed. The following research stages will seek to further elaborate and refine the calculation of the individual LCC items.

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## THE NEXUS OF MILITARY EXPENDITURE AND ECONOMIC GROWTH IN VISEGRAD GROUP COUNTRIES

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### **ABSTRACT**

*The relationship between military expenditures and economic growth has been investigated through many aspects. Even though this interrelationship is discussed frequently in defence economics studies, not many studies are examining this topic on case of Visegrad group countries (namely Czech Republic, Slovak Republic, Hungary and Poland). Our focus is to examine military expenditure and economic growth nexus for Visegrad group countries (V4) using economic variables and considering an external threat. Cross sectional dynamic analysis is used for time-period 1998 – 2015.*

**Keywords:** *Dynamic panel data, Economic growth, Military expenditure, Threat*

### **1. INTRODUCTION**

The relationship between military expenditures and economic growth is one of the most popular subjects of research in the defence literature. Benoit (1973, 1978) began to consider the impact of military spending on economic growth. Harris (1986) examined the endogenous impact of the domestic economy on the development of military expenditure by five East Asian countries - Malaysia, Thailand, Indonesia, the Philippines and Singapore. His conclusions discovered positive relationship between military expenditure in the current year and defense spending and the overall government budget in the previous year. Military expenditures in the current year show a slight inverse correlation with the inflation of the previous year. The balance of payments affects military spending through government spending. Harris research was followed by Looney and Fredericksen (1990) considering economic variables and the availability of resources as the key determinant of military spending. All the countries surveyed increased military budgets in anticipation of economic growth, but the time lag was different in each country. Surplus resources may lead to stabilization in Singapore (Singapore), growth (Malaysia) and distribution delay (Philippines). Uk Heo and Karl DeRouen Jr. (1998) are exploring the impact of economic and technological developments on the growth of military spending. If technological progress is part of the production function, it is possible to trace the negative effect of military spending on growth. Abu-Bader and Abu-Qarn (2003) take into consideration the relationship between the components of government spending. They investigated the direct relationship between these variables in the case of Israel, Egypt and Syria, as these countries most often appear in the Israeli-Arab conflict. In all three states, there was a negative relationship between military spending and economic growth. In Israel and Syria, there was a positive impact of civilian spending on the growth of the economy. Dunne, Smith and Willenbockel (2004) solve the impact of military spending through the Feder-Ram model. It critically evaluates the model, its limits and problems, and recommends not using the model. For research in the defense economy, in their opinion, Sollow's growth model or Barro models are more appropriate. The authors present the reason for this research as a fragmentation of the opinion on the establishment of an appropriate econometric procedure for examining the relationship between military expenditures and economic growth. Pieroni (2009) based the

research on the assumption that the influence of military spending on growth is influenced both by endogenous and external threats. The extension of the model captures the impact of civilian and military government spending on economic growth, thus predicting a positive correlation between the size of military spending and the "effectiveness" of civilian spending in military spending and growth. This effect is captured as a conditional variable in the growth equation and can alleviate the original negative relationship. Dunne and Nikolaidou (2012) used the augmented Solow model employing panel and time series methods to investigate defence spending and economic growth in EU15 over the period 1961-2007. Results of both approaches showed a negative or no effect of military burdens on economic growth. Topcu and Aras (2017) investigated the relationship between military expenditure and other variables in Central and Eastern European countries. They found out the influence of economic growth on military expenditure in the sample of selected countries. George and Sandler (2017) applied two-step GMM (generalized method of moments) model of demand for defense spending of NATO allies. They investigated NATO's demand for defense spending in three times periods 1968 – 2015, 1991 – 2015 and 1999 – 2015. This distribution of time line could help to describe NATO's response of geopolitical change better. Interesting features for NATO's defense spending appeared after the end of the cold war. The reducing of a percentage of military output to GDP was caused by perceiving Russia as a minor threat. In the post-Cold War era military expenditures of NATO members are driven more by transnational terrorist attacks than Russia's military expenditures.

## 2. PANEL DATA MODELS

There are several approaches to analyze link between military spending and some economic or socioeconomic variables. Some authors prefer Barro and Sollow growth's models (Dune et al., 2004), others tend to use vector autoregressive models or vector error correction models (Odehnal, Neubauer, 2015). In recent years, a number of authors have used panel data models to study development and relationships between macroeconomic indicators (Roubalova and Hampel, 2016, Paleologou, 2013, George and Sandler, 2017). According to Odehnal and Sedlačik (2015), one can find differences between NATO member countries in terms of economic, political and military factors. The authors of this contribution have decided to analyze link between military expenditure and selected economic variables only in a part of NATO countries, in Visegrad group countries. For this purpose, a dynamic panel data model was employed.

The pooled panel data model is given by

$$y_{it} = \alpha + \beta'X_{it} + u_{it},$$

where  $i = 1, 2, \dots, n$  is the individual index (group, country, ...),  $t = 1, 2, \dots, T$  is the time index and  $u_{it}$  is a random zero mean disturbance term,  $X_{it}$  is a  $k \times 1$  vector of independent variables,  $\beta_{it}$  is a  $k \times 1$  vector of parameters. This is a standard linear model *pooling* all data across  $i$  and  $t$ .

If one needs to model individual heterogeneity, it can be assumed that the error term has two separate components  $u_{it} = \mu_i + \varepsilon_{it}$ , where  $\mu_i$  is specific to the individual and does not change over time. We get the model

$$y_{it} = \alpha + \beta'X_{it} + \mu_i + \varepsilon_{it}$$

The error term  $\varepsilon_{it}$  is usually assumed independent of both the regressors  $X_{it}$  and the individual component  $\mu_i$ . If the individual component is correlated with the regressors, it is customary to treat the  $\mu_i$  as next  $n$  parameters to be estimated. This is called the *fixed effect* model (Hsiao 2014, Wooldridge 2002). Let us denote  $\alpha_i = \alpha + \mu_i$ , we obtain the model

$$y_{it} = \alpha_i + \beta'X_{it} + \varepsilon_{it}.$$

If the individual component  $\mu_i$  is uncorrelated with the regressors, the model is termed *random effect*,  $\mu_i$  are not treated as fixed parameters, but as random drawings from a given probability distribution.

When analyzing panel data, we often encounter the problem of autocorrelation in residuals. One possible solution is the application of dynamic models. A *dynamic* linear panel data model can be written in the form

$$y_{it} = \rho y_{i,t-1} + \beta'X_{it} + \mu_i + \varepsilon_{it}.$$

The main idea on which the difference estimator is based is to get rid of the individual effect via differencing. First-differencing yields

$$\Delta y_{it} = \rho \Delta y_{i,t-1} + \beta' \Delta X_{it} + \Delta \varepsilon_{it}.$$

The error term  $\Delta \varepsilon_{it}$  is autocorrelated and also correlated with lagged dependent variable  $\Delta y_{i,t-1}$ . Generalized method of moments (GMM) approach is used to get estimates of given equation, see Arellano and Bond (1991).

## 2.1. Empirical results

Analysis of determinants of military expenditure in the Visegrad group countries (Czech Republic, Slovakia, Poland and Hungary) are based on time series of predominantly macroeconomic variables in time period 1998–2015 (the database SIPRI, The World Bank). To describe military expenditure – MILEX [% of a gross domestic product (GDP)], we use following variables:

- government debt – DEBT [% of GDP],
- economic growth – EC. GROWTH [%],
- inflation – INFLATION [%],
- Russian military expenditure [% of GDP]
- net trade – NET TRADE [in billions \$]
- population of country [in millions]
- tax revenue – TAX REVENUE [% of GDP]

Firstly, the fixed and random effect models were applied. The estimated model suffers from the presence of autocorrelation in residuals. Breusch-Godfrey/Wooldridge and Durbin-Watson test for serial correlation in panel models reject the null hypothesis of no autocorrelation. Based on these results, we have decided to employ a dynamic panel to model military spending. The parameter estimates of the model containing all explanatory variables (the full model) and estimates of the final model (with estimates which are statistically significant at least at the significance level 0.10) are summarized in Table 1. The final model using the approach of generalized method of moment estimated contains lagged value of military expenditure with positive coefficient, government debt with a negative coefficient (increase in DEBT causes decrease in MILEX), military expenditure in Russia with positive sign (increase in Russian

military spending means increase military spending in V4), population size with a negative coefficient (the increase in POPULATION causes decrease in MILEX) and finally tax revenues again with a negative sign. Residuals of the estimated dynamic model are not auto-correlated (p-values of Arellano-Bond test for zero autocorrelation for order 1 and 2 are 0.0696 and 0.7017), instrumental variables used in the model are valid (p-value of Sargan test is 0.4318). The quality of the fit is graphically displayed in Figure 1.

Table 1: Parameter estimates of dynamic panel of V4 countries

<i>Full model</i>				<i>Final model</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>p-value</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>p-value</i>
<i>const</i>	-0.03959	0.00596	0	-0.03348	0.00309	0
<i>MILEX(-1)</i>	0.42709	0.05669	0	0.48666	0.02459	0
<i>DEBT</i>	-0.00329	0.00017	0	-0.00212	0.00100	0.033
<i>EC. GROWTH</i>	0.00049	0.00306	0.8732			
<i>INFLATION</i>	-0.00713	0.00510	0.1619			
<i>MILEX Russia</i>	0.15179	0.04290	0.0004	0.15964	0.04072	0.0001
<i>NET TRADE</i>	0.00266	0.00175	0.1273			
<i>POPULATION</i>	-0.20941	0.05569	0.0002	-0.18148	0.10854	0.0945
<i>TAX REVENUE</i>	-0.01001	0.00488	0.0403	-0.01349	0.00596	0.0236

### 3. DISCUSSION

This paper examined the relationship between military expenditures and economic growth and other determinants of military expenditures such as government debt, inflation, net trade, tax revenue, population and Russian military expenditures. To investigate the determinants of military expenditures we focused on Visegrad group countries (V4) Czech Republic, Slovak Republic, Hungary and Poland. We focus on variables such as military expenditures of V4, economic growth, government debt, inflation, Russian military expenditure, net trade and tax revenue. We have not found any statistical significant link between military expenditures and economic growth, inflation and net trade. Our empirical results indicate that negative tax revenue coefficient had a negative impact on military expenditures. We used Russian military expenditures as an indicator for an external threat. Contrary to expectations George and Sandler discovered a negative effect of growing military expenditures of Russia in their empirical model of NATO's defense spending (George, Sandler, 2017). Russia's military expenditures are associated with a positive influence in our analysis. A 1% increase in Russia's military expenditure leads almost to 0.16% increase of military expenditure in our selected group. It seems that military expenditures of V4 countries are driven by Russia's military expenditures. So, the growing defense spending of Russia is perceived as a potential threat for the whole group of V4.

Figure following on the next page

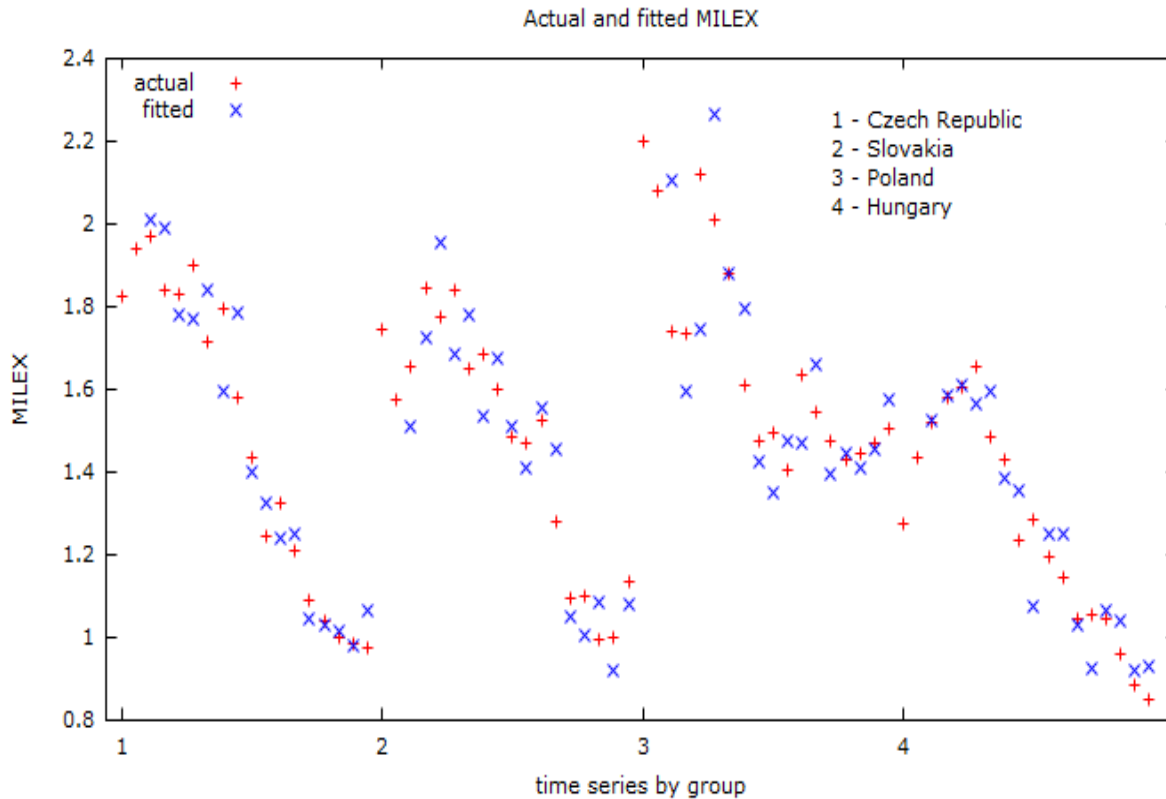


Figure 1: Actual a fitted values of military expenditure of V4 countries 1998 - 2015

A positive change of population size of 1 million inhabitants generates a 0.18% decrease of military expenditures in the V4 countries group. This result is not in accordance with some authors who are associating the population grow with the rising demand for defence and an increase of military expenditures. The negative impact of population on military expenditure could be connected with the perception of internal security, optimization of defense costs or preferring civil consumption needs to security needs (Dunne, Perlo-Freeman, 2003). The negative effect of the population increase could be also associated with positive or negative effect on military expenditure (Ambler, Neubauer, 2017). The role of government debt in military expenditures has showed a negative sign. This is inconsistent with the findings of Paleologou (2013). The results of Paleologou's study came to a conclusion that decreasing of military spending could help to decrease government debt.

#### 4. CONCLUSION

This study examines the relationship between economic growth and military expenditures using the date Czech Republic, Slovak Republic, Hungary and Poland of the period 1998 – 2015. To explore the interaction between military expenditure and economic growth we focused on following variables such as military expenditure, economic growth, government debt, inflation, net trade, population, tax revenue and military expenditures of Russia. Our results are based on a dynamic GMM model and we have reached the following findings. First, our findings do not indicate any impact of military expenditures on economic growth, inflation and net trade. Second, the growth of the military expenditures of Russia could be considered as a potential threat for V4 countries and they are trying to follow the trend of military expenditure of Russia as their potential rival. Third, results of our model show the negative effect of an increase in population size on military expenditures in V4 countries. Fourth, our findings suggested negative influence of government debt and tax revenue on military expenditures.

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## TESTING FISCAL SUSTAINABILITY IN THE REPUBLIC OF MACEDONIA - A VAR APPROACH

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### ABSTRACT

*The recent global financial and economic crisis caused great concerns in many developed countries (especially in the European Union) due to rising debt levels and deterioration of their fiscal space. The adverse effects of high indebtedness highlighted the importance of maintaining sustainable public finances. This problem was not limited to rich and highly developed economies. The Republic of Macedonia also experienced such developments in the fiscal area and the public debt ratio doubled in the last decade. The aim of this paper is to investigate the fiscal sustainability of Macedonia using quarterly data for the period 2005 – 2016. We use a VAR model to determine whether the primary balance responds positively to increases in government indebtedness, thus ensuring fiscal sustainability, or is set exogenously and independently from changes in government liabilities. The empirical analysis shows that the primary balance lacks the necessary and sufficient positive response to an increase in the government debt level that helps prevent a further debt accumulation. These results, together with the drastically increased public debt since 2008, imply a need for a faster adjustment of the primary balance after a government debt shock in order to prevent reaching even higher debt levels and losing a valuable fiscal space.*

**Keywords:** *fiscal reaction function, fiscal sustainability, primary balance, government debt, VAR*

### 1. INTRODUCTION

The recent global financial and economic crisis caused great concerns in many developed countries (especially in the EU) due to rising debt levels and deterioration of their fiscal space. In the face of the European debt crisis, public finance sustainability took center stage in economic discussions. These events have reconfirmed the adverse effects of the rising costs of an ever growing public debt on economic growth, monetary stability and public finance. This problem was not limited to rich and developed economies, but also appeared in countries in Central, Eastern and Southeastern Europe. The Republic of Macedonia also experienced bad developments in the fiscal area and the public debt ratio doubled in the last decade. The definition of the term fiscal sustainability is not straight forward. It is most often regarded as the long-term solvency of the government. A government is solvent if it is able, within an infinite horizon, to repay its debt with future primary surpluses without an explicit default (IMF, 2002), i.e. if the intertemporal budget constraint is met (Wyplosz, 2006; IMF, 2003). Fiscal unsustainability implies that current fiscal policies can not continue forever and sooner or later, an adjustment will be needed. Otherwise, the debt will explode. The capacity of maintaining high debt depends on the level of development of financial markets, the perceived risk, the trust

in the government capacity to implement reforms and consolidate deficits, the level of global risk aversion and investment alternatives to government securities. Some authors find that less developed countries have a lower debt tolerance and default can occur even at much lower debt levels (see Reinhart, Savastano and Rogoff, 2003; IMF, 2003). A common approach (see Canzoneri et al., 2001; Afonso, 2008; Afonso and Jalles, 2011, 2016), for the empirical investigation of fiscal sustainability is to assess whether the primary budget balance reacts positively to growth of public debt, meaning that the fiscal authorities are driven by stabilization and sustainability motives and whether the improvement of primary budget balance negatively influences government debt. Bohn (1998) introduced this approach, which shows that a sufficient condition for sustainability is that the government reacts systematically to increases in government debt by adjusting the primary balance (Bohn, 2005). This, according to Bohn (1995; 2007), is an error correction mechanism: if the public debt ratio grows, the government should respond by increasing the primary balance in order to keep or even reduce the debt ratio. Also this approach allows accounting for the influence of other heterogeneous, often transitory influences (Mendoza and Ostry, 2007). The aim of this paper is to investigate the fiscal sustainability of Macedonia using quarterly data for the period 2005 – 2016, by estimating a fiscal reaction function (following Bohn) within a VAR framework. In this light, the rest of the paper is structured as follows. Section 2 briefly reviews the empirical literature on the use of fiscal reaction functions in assessing fiscal sustainability, section 3 explains the implemented methodology, section 4 provides a discussion of the empirical results and section 5 gives concluding remarks.

## 2. OVERVIEW OF THE EMPIRICAL LITERATURE

There is a vast empirical literature on the issue of fiscal sustainability. The studies use various methods and different time horizons, as well as different choice of variables. Generally speaking, there are two classical methodological econometric approaches, focused on analyzing the time series characteristics of public debt and primary balance, or government revenues and expenditures, in order to check whether they are consistent with the necessary conditions for meeting the intertemporal budget constraint. Specifically, they test the stationarity of public debt or budget deficit, or the cointegration between public debt and primary surplus or between government revenues and expenditures (Wilcox, 1989; Hamilton and Flavin, 1986; Trehan and Walsh, 1991; Hakkio and Rush, 1991; Afonso, 2005;).<sup>1</sup> According to Bohn (2005), stationarity and cointegration tests can give misleading results, since they don't account for the uncertainty and are based on very strong assumptions, especially regarding the interest rate. The fiscal reaction function can be viewed as a backward-looking model based on historical data that indicates whether governments had the ability in the past to run higher surpluses, or at least to lower the primary deficit, when public debt increased. Here we focus on the studies that implemented a fiscal reaction function. Most studies focus on developed countries (Bohn, 2005; de Mello, 2008; Mendoza and Ostry, 2007; Afonso and Jalles, 2011, 2016; IMF, 2003; Baldi and Staehr, 2013; Wyplosz, 2006; Fincke and Greiner, 2012; Canzoneri et al., 2001). Some studies include both developed and developing or transition economies (IMF, 2003; Mendoza and Ostry, 2007; Ostry et al., 2010), while a growing body of literature focuses on CEE and SEE countries or other emerging and developing countries (Burger et al., 2011; Shijaku, 2012; Tanner and Ramos, 2002; Eller and Urvova, 2012; Zdravkovic et al., 2013; Llorca and Redgepagic, 2007; Zoli, 2005; Stoian and Campeanu, 2010; Trenovski and Tashevska, 2015). Most studies employ OLS single country analysis (Bohn, 2005; 2007; Burger et al., 2011; Shijaku, 2012; Tanner and Ramos, 2002; de Mello, 2008) and panel analysis (Mendoza and Ostry, 2007; Afonso and Jalles, 2011, 2016; IMF, 2003; Eller and Urvova, 2012; Baldi and

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<sup>1</sup> These are so called backward-looking approaches, as opposed to forward-looking approaches, mostly based on the seminal work of Blanchard (1990), Blanchard et al. (1990), Buiter et al. (1993).



Staehr, 2013; Zdravkovic et al., 2013; Llorca and Redgepagic, 2007; Wyplosz, 2006; Fincke and Greiner, 2012), although a VAR approach has also been used (Canzoneri et al., 2001; Tanner and Ramos, 2002; Zoli, 2005; Burger et al., 2011; Shijaku, 2012; Trenovski and Tashevska, 2015; Afonso and Jalles, 2011, 2016). Bohn (1998) found strong evidence in favour of the sustainability of the US fiscal policy in the 20th century and concludes that policy-makers eventually reacted to the accumulation of large debt positions over this period of time. Bohn (2005) confirmed these findings. First he examined the stationarity of public debt and deficit series and found no unit roots, and then revealed a positive response of primary balance to public debt in the US (1792–2003). Wyplosz (2006), Fincke and Greiner (2012) and others focus on European countries and find some evidence of a positive feedback from debt to the primary balance. De Mello (2008) finds that in Brazil the primary balance reacts positively and strongly to the lagged debt stock. Mendoza and Ostry (2007) looked at data for 34 emerging and 22 industrialized countries and confirmed that the sustainability condition was met in the countries with moderate debt levels, but not in the highly indebted countries. They warn against a smaller ability of governments to keep fiscal solvency above a 50-60% of GDP level. They found a stronger response in the emerging countries because a riskier fiscal and financial environment requires a stronger response to maintain the fiscal sustainability. IMF (2003), on the other hand, found that the primary balance response weakens with the growth of the debt ratio in the emerging economies and stops at a 50% of GDP level, while in the industrialized countries, there is a strong reaction at high debt levels. Afonso and Jalles (2011) investigated the relationship between primary balance and debt for OECD countries for the period 1970-2010 using panel VAR and found evidence that fiscal authorities do seem to care about the sustainability of public finances. Berti et al. (2016) estimated a fiscal reaction functions for EU countries and their results indicated that authorities mainly positively adjust their fiscal policy to rising levels of public debt, although to a weak extent in some cases. Eller and Urvova (2012) found a positive response of primary balance to debt shocks in eight CESEE countries, confirmed in Zdravkovic et al. (2013) for a panel of 21 CESEE countries. Stoian and Campeanu (2010) got mixed results for the reaction of primary balance to debt for a group of CEE countries.

### 3. METHODOLOGY

The analysis is based on a fiscal reaction function, following Bohn (1995; 2007). These analyses usually assess the primary balance reaction to changes in public debt, which is included in the model with one lag. The systematic, that is, average response of the primary balance to past debt is crucial for the fiscal sustainability. If the fiscal authorities react systematically to indebtedness by improving the primary balance in order to maintain public debt sustainable throughout time, then the transversality condition is met and the fiscal policy prevents excess debt accumulation (Bohn, 1998). The public debt evolution depends on whether the concern for debt sustainability dominates the snowball effect or vice versa. Its main advantage lies in the direct testing of the link between primary surplus and public debt, which does not require any explicit strong assumptions about the interest rates. However, as Ghosh et al. (2013) point out that this condition can be thought of as weak sustainability that does not, for example, rule out a permanently increasing debt-to-GDP ratio. The use of primary balance, instead of total budget balance has an advantage because the government controls primary expenditures more easily, while the interest payments are an exogenous category and are determined by past activities of fiscal policy related with borrowing (Angelovska-Bezovska et al., 2011). As in other studies (Bohn, 2007; Ostry et al., 2010; Eller and Urvova, 2011; Afonso and Jalles, 2011) we use cyclically unadjusted balance, because: this helps avoid the difficulties of the methodology for calculating cyclically adjusted variables related to potential GDP; the cyclically adjusted primary balance can be influenced by temporary factors, not directly related

to the cycle, such as onetime operations, creative accounting and classification errors. It should be taken into account that primary balance includes the response of automatic stabilizers, as well as of discretionary policy. The usual way of assessing the fiscal reaction is by estimating a regression equation where the primary balance is the dependent variable. The basic formula is the following:

$$pb_t = \beta_0 + \beta_1 d_{t-1} + \beta_2 z_t + \varepsilon_t \quad (1)$$

where  $pb_t$  is the primary balance,  $d_{t-1}$  is the lagged debt,  $z_t$  is a vector of control variables and  $\varepsilon_t$  is the error term. Usually the models contain the output gap as a control variable, which reflects the business cycle and shows whether the government conducts a short term aggregate demand stabilization policy (Bohn, 1998; Burger et al., 2011; Budina and van Wijnbergen, 2008; Mendoza and Ostry, 2008; Celasun, Debrun and Ostry, 2006; Afonso and Jalles, 2011; Fincke, 2013; Eller and Urvova, 2012). A positive response of the primary balance to the output gap shows that during favourable economic conditions the budget position of the government improves, indicating a countercyclical fiscal reaction. Most of the estimated fiscal reaction function for developing countries are based on panel regression models since there are no long data series for individual countries (Celasun, Debrun and Ostry, 2010; Mendoza and Ostry, 2008; Eller and Urvova, 2012 etc.). However, as Budina and van Wijnbergen (2007) point out, assessing fiscal reaction with panel data cannot capture well the specific situation in a certain country despite the inclusion of fixed country effect. Therefore in this paper we assess the fiscal reaction only for Macedonia. The use of VAR model that captures multiple interactions between the endogenous variables in the models gains importance (Tanner and Ramos, 2002; Afonso and Jalles, 2011; Burger et al., 2011; Shijaku, 2012). The endogenous variables are explained by their own past values and the past values of the other variables (see Stock and Watson, 2001). When assessing regression equations with OLS, if the model contains non-stationary series, it could provide spurious results. Hence, following Burger et al. (2011) and Afonso and Jalles (2011), we use a vector model. We give preference to the vector model also due to the fact that the OLS method omits the feedback effect of primary balance on debt. Namely, this framework does not distinguish between ex-post primary balance adjustments to government obligations (public debt) and ex-ante adjustments of government obligations (public debt) to primary balance (Tanner and Ramos, 2002, Canzoneri, Cumby and Diba, 2011).

We use a two-variable VAR model with debt and primary balance, in order to assess the fiscal reaction to debt (see Tanner and Ramos, 2002; Burger et al., 2011; Shijaku, 2012; Afonso and Jalles, 2011; Zoli, 2005; Trenovski and Tashevska, 2015). This type of model is commonly used to determine the dominant regime of economic policy – fiscal or monetary (Canzoneri et al., 2001; Fialho and Portugal, 2005; Zoli, 2005). Here we follow the approach of Tanner and Ramos (2002), who analyze the fiscal sustainability of Brazil and Zoli (2005), who analyzes fiscal and monetary policy in the developing countries. The model captures the relationship between the present public debt level and the future primary balance and between the present primary balance and the future public debt level and can be presented as follows:

$$X_t = \beta_0 \sum_{i=1}^p \beta_i X_{t-i} + v_t \quad (2)$$

where  $X_t = [\text{primary balance, public debt}]$ ,  $a_j$  is a vector of coefficients  $v_t$  is an error terms vector. Each element in the vector of error terms consists of own errors  $w_t$  and contemporaneous correlations with other errors:  $v_t = Bw_t$ . where  $B$  is a matrix of diagonal elements equal to one, and the elements out of the diagonal that are different than zero reflect the contemporaneous

correlations between the residuals. The VAR model estimates the causality of the time series in both directions (Zoli, 2005)<sup>2</sup>:

$$pb_t = \alpha_0 + \sum_{j=1} \alpha_j pb_{t-j} + \sum_{j=1} \beta_j d_{t-j} + \varepsilon_t \quad (3)$$

$$d_t = \gamma_0 + \sum_{j=1} \delta_j pb_{t-j} + \sum_{j=1} \gamma_j d_{t-j} + \mu_t \quad (4)$$

Where  $pb_t$  denotes primary government balance, while  $d_t$  is general government debt. First we assess a model where pb comes first and d second. The order of variables follows the logic that primary balance has a direct and contemporaneous impact on debt, as one of its components, whereas the debt level has a lagged impact on primary balance. This is in accordance with Bohn's fiscal reaction function where in the regression model the public debt is included with a lag. In the second variant of the model d is the first variable, in order to see if the previously gained results will change (see Tanner and Ramos, 2002). When interpreting the results, it has to be taken into account that the model does not include a variable that reflects the cyclical movements of the economy. In case of short series (like ours), a lack of a significant relationship between the primary balance and the public debt can be found, but that could arise also from the unpreparedness or inability of the government to create larger primary balances in period of recessions (Zoli, 2005). Thus, to complement the analysis, we expand the VAR model with the output gap (Afonso and Jalles, 2011; Burger et al., 2011; Shijaku, 2012) and a control dummy variable *crisis*.

### 3.1. Data and variables

The analysis is based on quarterly data for the period 2005Q1 – 2016Q4. A key fiscal policy measure is the general government primary balance (PB), calculated as a difference between government revenues and primary government expenditures. A measure of the indebtedness is the general government debt (D). Both variables are expressed as ratio to GDP. The data series are presented in figure 1. Until 2008 there is a drastic fall in debt, accompanied by more favourable primary balances. Since the end of 2008, marked with a significantly increased deficit, there is a period of constant debt growth, but the primary balance does not show signs of systematic reaction in the direction of slowing the debt growth. Hence we do not expect to find a statistically significant reaction of the primary balance to debt shocks.

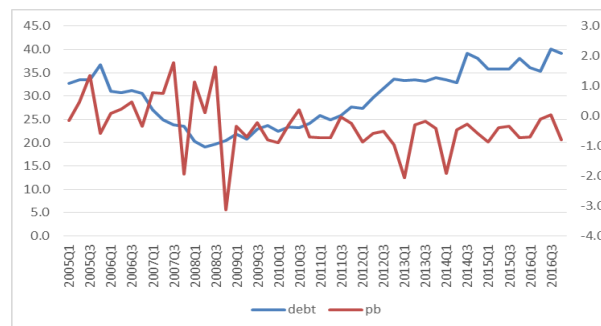


Figure 1: Primary balance and government debt (authors' calculations)

The output gap (YGAP) is calculated as a percentage deviation of the current real GDP level from its long run trend, while the long run trend is calculated with the Hodrick-Prescott filter. For robustness check, the output gap is replaced in the model with the real GDP growth (G).

<sup>2</sup>Zoli (2005) uses first difference of the variables due to public debt non-stationarity. However, we estimate the model in levels, considering the dilemma on the necessity for stationary series in VAR (see Lutkepohl, 2011).

The impact of the crisis is captured with a dummy variable crisis, with value 0 up to the third quarter of 2008 and 1 after that, to account for the shift in the trend of government debt and in the behaviour of the fiscal authorities. The series were seasonally adjusted, in order to prevent a possible distortion of the results due to seasonal components, which are especially frequent in government expenditures series (used to calculate the primary balance). The unit root tests provide mixed results for stationarity of the primary balance. The ADF test finds it stationary at 10% confidence level, the PP test finds it to be stationary and the KPSS test rejects the null for stationarity at 10% and 5%, but not for 1%. Concerning the general government debt, we can conclude that it is I(1). The output gap and real GDP growth rate are stationary.<sup>3</sup> While the OLS model can give distorted results when the model includes nonstationary series, there is a wide debate over the necessity of stationarity of all series in a VAR model (Lutkepohl, 2011; Burger et al., 2011). Hence the nonstationarity is not expected to be an obstacle for reaching good quality results. The data comes from several sources. The government revenues and expenditures, including interest expenditures data (used to calculate the primary balance) come from the bulletins of the Ministry of Finance of the Republic of Macedonia and from the bulletins and quarterly reports of NBRM. The nominal GDP data are taken from the statistical base of the State Statistical Office, while the real GDP and GDP growth rate data are taken from the bulletin of the NBRM for the fourth quarter of 2014. The general government debt data are taken from the database on the website of the Ministry of Finance.

#### 4. DISCUSSION OF RESULTS

The VAR model<sup>4</sup> is bivariate, consisting of data series on primary balance and general government debt. The number of lags was determined using the information criteria, which suggested using two lags. The results are shown in table 1.

*Table 1: VAR Lag Order Selection Criteria (authors' calculations)*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-176.6093	NA	16.93646	8.505205	8.587951	8.535535
1	-112.9439	118.2357	0.988793	5.663996	5.912235*	5.754985
2	-106.2582	11.77958*	0.871639*	5.536105*	5.949836	5.687754*
3	-104.3227	3.225930	0.965543	5.634412	6.213635	5.846720
4	-101.2188	4.877519	1.014934	5.677085	6.421800	5.950052
5	-96.73456	6.619565	1.003268	5.654026	6.564234	5.987654

\* indicates lag order selected by the criterion

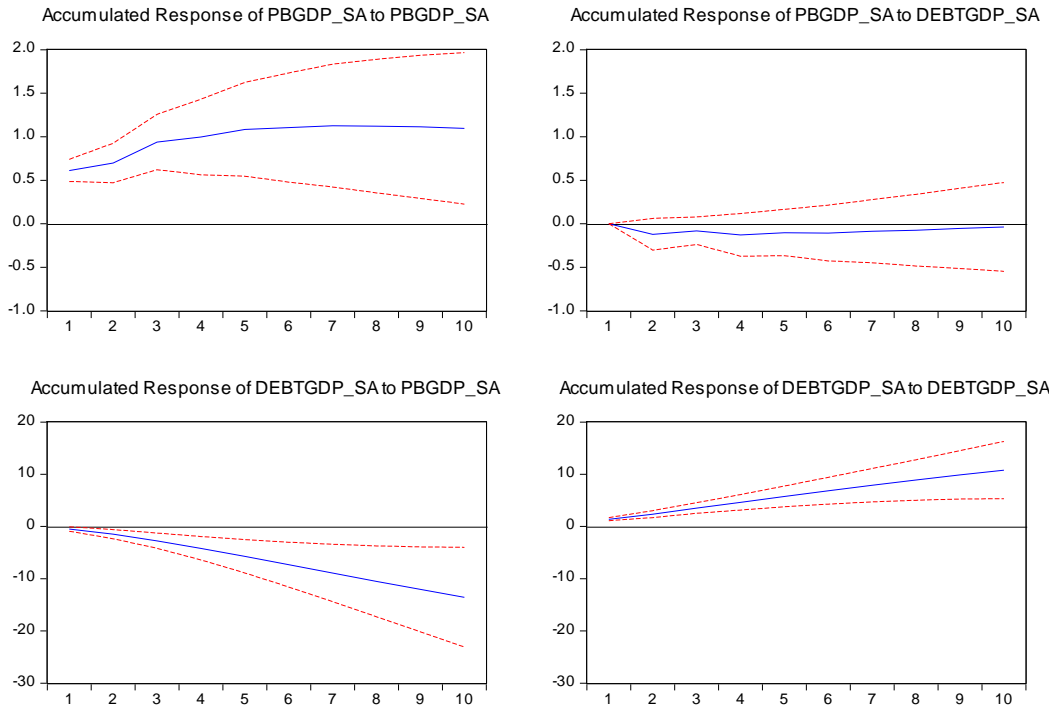
First we estimated a model where the order of the variables is primary balance, debt. The model is stable – all inverse roots of the characteristic polynomial are inside the unit root circle. The necessary assumptions about no serial correlation (Portmanteu test and LM test for serial correlation) and homoscedasticity (White homoscedasticity test) are also satisfied. The accumulated impulse response functions show a statistically insignificant response of the primary balance to debt shocks (mostly negative) and a negative response, i.e. reduction of debt following a primary balance shock, significant during the whole analyzed period. Canzoneri, Cumby and Diba (2011) explain the fall in debt in the following way: the primary surplus is used to pay part of the current debt and hence the future year debt is smaller.

<sup>3</sup> The test results are not presented here due to limited space, but are available upon request. The same applies for all following results that are not presented in the paper.

<sup>4</sup> Before moving to estimating the VAR, a Johansen cointegration test was performed, since for analyzing the interdependence of cointegrated series a VECM is necessary. However, no cointegration was found.

A primary balance shock causes a positive self-reaction, indicating an inertia in conducting the fiscal policy (however the significance fades away), leading to a further debt reduction. On the other hand, the automatic debt dynamics is significant throughout the whole period.

Figure 2: Accumulated impulse response functions (authors' calculations)  
 Accumulated Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.



Angelovska-Bezovska et al. (2011) find a positive primary balance response to a debt shock using the GMM method. However, it should be considered that their analysis includes a very short time series of annual data (1990-2009) and it captures the pre-crisis period, i.e. before the Macedonian economy felt the consequences of the global economic crisis. On the other hand, Trenovski and Tashevska (2015), using a VAR model, find no statistically significant primary balance response. The variance decomposition shows that there is a very small percent of the variance of error prediction of the primary balance that is explained by debt shocks (0% in the first quarter, 4% in the fourth quarter and 4,4% in the tenth quarter) and the share of primary balance shock in explaining variance of the prediction error of debt is larger, growing from 11,6% in the first period to 62,3% in the tenth period. This result is confirmed with the Granger causality test (table 2). The result shows that past values of debt do not help to explain the short run movement of primary balance, while primary balance Granger causes debt.

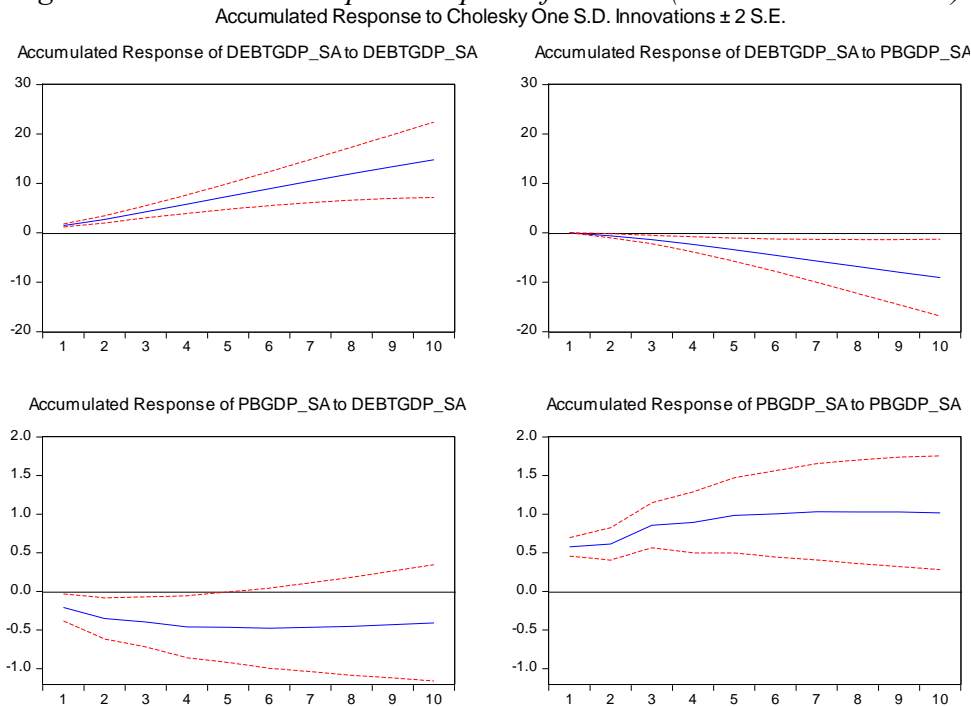
Table 2: VAR Granger Causality/Block Exogeneity Wald Tests (authors' calculations)

	Chi-sq	df	Prob.
D does not Granger cause PB	2.260279	2	0.3230
D does not Granger cause PB	12.12236	2	0.0023

For a robustness check, a VAR model with an inverse variable ordering (D, PB) was assessed. The model is stable and satisfies all necessary assumptions. The accumulated impulse response functions show that after a debt shock, the primary balance decreases (the response is only statistically significant until the fifth quarter). This result implies a behaviour that does not lead to debt sustainability in the long run.

On the other hand, the debt decreases after a primary balance shock, and the response is statistically significant. The debt and primary balance inertia is confirmed.

*Figure 3: Accumulated impulse response functions (authors' calculations)*



Later we expanded the model with an additional variable - the output gap and with the exogenous control variable - crisis. However, this did not cause remarkable changes in the primary balance response to debt shocks and vice versa. With the inclusion of the output gap, the accumulated impulse response functions show that the primary balance response remains negative or neutral and insignificant. The output gap has no significant impact on the primary balance. However, if we replace the output gap with the real GDP growth rate, then the impulse response functions show a positive reaction of the primary balance to GDP shocks. Hence, a strong economic growth is key to improving the fiscal situation. When the model is expanded with the variable crisis, there is no statistically significant reaction of the primary balance nor of the public debt. The explaining power of the variables shocks for the variance of prediction error is also reduced, implying that the crisis effect dominates other influences. Overall, the model shows that the primary balance does not react systematically to increases in public debt in direction of preventing its further accumulation. Thus it does not meet the Bohn criteria for fiscal sustainability. The improvement of the primary balance causes, as expected, a reduction of the indebtedness of the country. The presence of the same reaction in all specifications of the model confirms the robustness of the relationship.

## 5. CONCLUSION

The results of the empirical analysis show that the primary balance lacks the necessary and sufficient positive response to an increase in the government debt level that helps prevent a further debt accumulation. The primary balance response to debt shocks remains negative or neutral and insignificant in the model using the output gap. The output gap has no significant impact on the primary balance. However, in the model with the real GDP growth rate, the results indicate a positive reaction of the primary balance to GDP shocks. Hence, a strong economic growth is key to improving the fiscal situation.

These results, together with the drastically increased public debt since 2008, imply a need for fiscal tightening and measures to boost economic growth, since they signal a lack of sufficient fiscal stabilization efforts. The fiscal authorities need to be more responsive to a government debt shock in order to act countercyclically and to prevent reaching higher debt levels and losing valuable fiscal space. The level of debt in Macedonia is not extremely high (39,6% - general government debt; 48,5% - public debt), but the growth dynamics in the last decade are worrisome. International organizations (World Bank, IMF) have warned against the further increase in debt and suggest conducting fiscal consolidation.

According to the IMF, while the growth of real GDP is the key category that reduces the Macedonian government debt, the primary deficit contributes the most to its growth. This means that it is necessary to enforce measures for reduction of the primary deficit in order to stabilize the debt.

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## RESEARCH INTO THE LABOR MARKET SEEN FROM THE PERSPECTIVE OF WORKING WOMEN

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### **ABSTRACT**

*The problems of women in the labor market are an extremely important subject. Within the last several years the interest of politicians, scientists and journalists in the situation and position of women in the job market has been intensively growing. Without a doubt women to a greater degree than men must reconcile their work with their household duties and responsibilities to their families. An analysis of the Polish labor market also shows differences in the way women and men are treated. It is confirmed by several coefficients which have remained unchanged for years: a lower coefficient of professional activity of women, a lower coefficient in hiring women, a higher level of unemployment among women, inequality in regards to remuneration and weak presence of women in regards to positions within upper management and on boards of directors of companies. Sex is still an important factor in determining the place and position of current and potential labor market participants. Despite the progressing process of feminization the problem of the professional life of women is still noticeable. This article aims to identify the factors influencing and defining the position of women within the labor market. The analysis concerned the perspective of working women. The conclusions were supported with the results of quantitative and qualitative research conducted on professionally active women and entrepreneurs from the Podlasie Voivodeship. The authors of this article participated within the research process realized between June and October of 2017.*

**Keywords:** *Podlasie labor market, women within the labor market*

### **1. INTRODUCTION**

The problems of women in the labor market are both still current as well as extremely important. Within the last several years the interest of politicians, scientists and journalists in the situation and position of women on the job market has been growing intensively. Without a doubt women, to a greater degree than men, must reconcile their work with their household duties and responsibilities to their families. An analysis of the Polish labor market also shows differences in the way men and women are treated. It is confirmed by several coefficients which have remained unchanged for years: a lower coefficient of professional activity of women, a lower coefficient in hiring women, a higher level of unemployment among women, inequality in regards to remuneration and weak presence of women in regards to positions within upper management and on boards of directors of companies (Zhang, 2017, pp. 6-20; Jaba et al., 2016, pp. 69-84). To analyze the situation of women on the Podlasie labor market seven In-Depth Interviews (IDI) and a survey study on 430 working women living in this area as well as three research panels using Focus Group Interviews (FGI) with employers were conducted.

### **2. WOMAN AS A WORKER. SPECIFICS OF THE LABOR MARKET OF THE PODLASIE VOIVODESHIP**

It is possible to see differences in the professional behavior of women and men which do not solely concern styles of management. H. Fisher (Fisher, 2003, pp. 21-23) claims that women

and men vary in the style of reaching decisions on account of the differences in the way that they think and process information. Women show a tendency for contextual thinking which allows them to see issues in a broader context than men. In making a decision they take under consideration greater amount of data, factors and options as well as perceive more ways of reacting (Moczydlowska, 2017, pp. 9-21). H. Fisher (Fisher, 2003, p. 23) describes the "female" way of thinking as network thinking differing from the sequential thinking of men which is concentrated and linear. Men, therefore, see their working environment as a set of diverse elements and women tend to perceive it as a whole or as a system of interdependent and affecting each other material and immaterial resources. They also more often make use of their stocks of emotional intelligence using empathy and intuition which allows them to build relationships more effectively (Kuc, Moczydlowska, 2009). Changes occurring in contemporary organizations, especially the growing role of relational capital and the emotional work context, predispose women in a natural way for professional success (Goleman et al., 2002). Research shows (Dobosiewicz, 2006) that such qualities as: high level of education (56%), ambition (51%), intelligence and diligence (48%), resourcefulness (37%) as well as tenacity and consistency (27%) are considered to be the source of women's professional achievement. Within the scientific discussion concerning the male and female way of functioning in the role of an employee there is no lack of opinions that it is not gender but solely the position of women and men in the structure of the organization's authorities which determines their particular style of management. One of the proponents of this current of thinking is R. Kanter (for Lisowaka, 2009, p. 111) who argues that if the status and range of authority for men and women holding the same positions was analogous then their behavior would also be comparable (Mollerstrom, Wrohlich, 2017, pp. 219-226). In concluding it should be stressed that the social roles of women, similar to the roles of men, were always influenced by the time period, its culture, its axionormative system, religion, political system as well as the local environment. From the psychological point of view it is important that the specific characteristics possessed by women make it easier for them to organize their social space, create social ties and perform numerous roles in the same time where within the contemporary reality the role of an employee becomes key. The main functions of the labor market include the allocation and reallocation of human resources which in the long term assure the balance between supply and demand for work. In respect to the subject of this research the supply side consists of women living within the area of the Podlasie Voivodeship. The greatest number of workplaces within the area in question is generated by: commerce, construction and industrial processing. Within the Podlasie region production is dominated by the sector manufacturing and processing consumer goods (meat, brewing, distilling, dairy as well as fruit and vegetable industries). Production of agricultural machinery and equipment, the textile industry as well as the wood industry also play important roles. Another significant area consists of the non-market sector which includes public administration, education, health and social care. In analyzing the regional labor market the following question may be considered: Are the opportunities offered by the demand side of the market satisfactory respect to its supply side? Is this satisfaction guaranteed solely through legal and economic factors or are the issues concerning mentality also considered? In short: Is the Podlasie labor market favorable to women? When it comes to the labor market in Podlasie women are in a much more difficult situation than men. According to statistics from the Provincial Labor Office (WUP) women are a majority in regard to the total number of the unemployed and their professional activity oscillates around 48% (WUP, 2016). Analyzing the regional differences in the employment indicator as well as the level of unemployment according to sex in 2016 it must be concluded that the Podlasie Voivodeship falls into a group of Voivodeships which have the highest unemployment of women (9.5% in 2016) and only an average indicator in women's employment (44.8% in 2016). The fact that women who are professionally active as well as those who are unemployed possess better

education than men is characteristic to the labor market in Podlasie, however, their higher level of education does not afford them an advantage. The discrimination of women within the labor market can be proven by, for example, differences in remuneration. In general women earn less than men, often even when holding the same position. Their competencies are also assessed less favorably when compared to men. What is more, they often work in fields which pay less, especially within the public sector, a certain kind of "inheritance" from the bygone era of socialism. It seems that in assessing the work of their employees many employers overlook their qualifications or efficiency and instead focus on their own needs. In the Podlasie region it is still possible to see horizontal segregation, a term which means that men and women do different types of work and that, in turn, divides particular professions and tasks into those done by men and those fulfilled by women. Professional segregation begins at vocational schools as well as in college. At universities women choose humanity related degrees five times more often than their male peers and education related ones six times more often. Men, in turn, choose technical and engineering degrees five times more frequently than women. Work that is considered "women's work" gets lower pay because it is assumed that it is easier. Lower wages earned by women are often the result of the fact that women themselves underrate their wage requirements coming to the conclusion that since their labor market situation is more difficult than that of men lower salary expectations will improve their chances of gaining and maintaining employment. Horizontal segregation is additionally augmented by vertical segregation where within professional hierarchy women occupy lower positions and men hold the higher ones. Vertical segregation is a subject which is not willingly addressed in public debate because, for example, there are no formal or legal obstacles which prevent women from attaining high positions within professional or organizational hierarchies. However, the share of women holding upper management positions in respect to all working women is relatively low. The aim of the article, therefore, is the identification of factors which condition and shape the position of women on the labor market.

### **3. RESEARCH METHODOLOGY**

The diagnosis of the situation of women working in the Podlasie Voivodeship was the main aim of the study. The quantitative method of Paper and Pencil Interviewing (PAPI) as well as the qualitative method of Focus Group Interviewing (FGI) were used to realize this goal. One of the key aims of the research and a part of the main goal of the study was the identification of the "grey market" among women working within the Podlasie Voivodeship. On account of the specific character of this research problem (the secrecy and lack of public disclosure) it was relatively difficult to define the general population and, what follows, the size of the sample. Female respondents fulfilling at least one of the criteria (drawn from the 2008 SNA definition) listed below qualified for the study:

- within the last year the person performed work that was not registered to avoid paying taxes and making social insurance contributions (economic underground)
- within the last year the person performed work that was not registered on account of the small scale of the undertaking or lack of legal regulations requiring that such activity be registered (the informal sector)
- within the last year the person performed work that was not registered because it was illegal
- the person withheld information about other types of income (such as, for example, tips).

To analyze the situation of women on the labor market of the Podlasie Voivodeship a study including 430 working women living in the above mentioned region was conducted. 425 women were between the ages of 18 and 64 and five were over 65 years old. 31.2% of respondents were working women aged between 25 and 34. Nearly half of the participants fell into two age groups: the 18-24 (25.3%) and the 25-34 (24%). The least numerous among the

women taking part in the study were the 55-65 year-olds (5.8%) and those older than 65 (1.2%). The study considered the opinions of women living in cities as well as rural areas of the Podlasie Voivodeship. Majority of respondents (29.5%) lived in cities with populations exceeding 250 thousand inhabitants which in Podlasie includes only the city of Bialystok. 24.4% of participants lived in villages. The smallest group (10.9%) consisted of women residing in cities with populations ranging from 51 to 150 thousand inhabitants. In order to keep the sample representative the opinions of women from all districts of the province were included. The size of the sample from each district was established on its share in the entire population of the province. The research also considered the respondents' education level. Three quarters of them held university degrees, 15.1% completed general studies and 7.2% technical studies in high school. The least numerous group of participants consisted of women who completed vocational schools (1.4%) or ended their education after primary schools (0.9%) or secondary schools (0.2%). Focus Group Interviews (FGI) were organized for employers from the Podlasie Voivodeship (representing three sub-regions: Bialystok, Suwalki and Lomza) in places ensuring the presence of employer representatives. The selection of FGI participants from among employers satisfied the accepted rules of quantitative research. The study included a total of 18 representatives of businesses operating within fields characteristic to the Podlasie Voivodeship. FGI allowed the identification of different ways in which the roles of women in the labor market were perceived and were conducted to meet the subject scope of analysis stipulated by the ordering party including:

- determination of the share of women working in individual fields of business as well as on various levels of the organizational structure;
- obtaining opinions regarding the opportunities for professional development and advancement of women within businesses from the Podlasie Voivodeship;
- assessment of the influence of support directed at women and their families on their situation on the labor market;
- assessment of the influence of support extended to women and their families on the operation of the business as well as the quantity and quality of available work resources and the fulfillment of employment needs of enterprises within the Podlasie Voivodeship.

The discussion commenced according to a previously developed script defining the aims of every stage of the study. The interviews were recorded making sure that the anonymity of respondents was preserved.

#### **4. LABOR MARKET SPECIFICS FROM THE PERSPECTIVE OF PROFESSIONALLY ACTIVE WOMEN AND EMPLOYERS**

Results of qualitative and quantitative research show varying perspectives of assessing the situation on the labor market. Over one half of working women taking part in the study had a break in employment. Most often it resulted from having a baby. Respondents were asked what persuaded them to go back to work. Most often it was economically motivated with 58% of them providing reasons falling into this area. The main source of motivation was financial need connected with sharing the burden of supporting the family. The necessity of continuing a career and the desire for self-fulfillment were also important. Approximately 50% of working women named these factors. Focusing solely on family life was not enough for study participants. They felt the need to cultivate the space outside the home to raise the family's living standards and to be with other people. Some women made the decision to return to being professionally active because they managed their own business. For the most part financial reasons as well as the desire for self-development turned out to be the factors determining professional activity of women representing the Podlasie Voivodeship. In respect to the causes of not pursuing employment by women of Podlasie over 50% of participants focused on

problems connected with caring for children or elderly members of the family. Irrespective of economic changes the responsibilities of caring for the family fall mainly on the shoulders of women. Additionally, the subject of the difficult situation on the labor market or the lack of suitable opportunities was also mentioned, with 33.3% of participants deciding it to be one of the main reasons for the professional passivity of women. However, 24.9% of respondents also claimed that lack of initiative in seeking employment was to blame. 20.2% declared lack of success and becoming discouraged after numerous failures, 19.8% mentioned problems connected with reconciling responsibilities to the family and professional duties and 19.5% referred to financial issues. The aspect of not believing in their abilities also emerged to be important. Among the women taking part in the study 17.9% declared that women have low self-esteem, 16% mentioned not being able to cope with life's problems, 12.6% indicated lack of competencies and skills to deal with the requirements listed in job descriptions, 12.1% made reference to the stereotypical perception of women in regards to age, 9.3% complained of the lack of opportunities of professional development and 7.7% drew attention to the problem of discrimination on the basis of sex. Other reasons for not gaining employment by women living in the Podlasie Voivodeship included: inhabiting rural areas, inherited unemployment benefits, the family's style of life, good financial situation, health related issues, retiring early and plans for starting own business. The arguments also involved statements regarding the receipt of social benefits and laziness. The acquisition of knowledge connected to factors determining the employment of women specific to the Podlasie Voivodeship was a very important issue. The results have been presented in Figure 2.

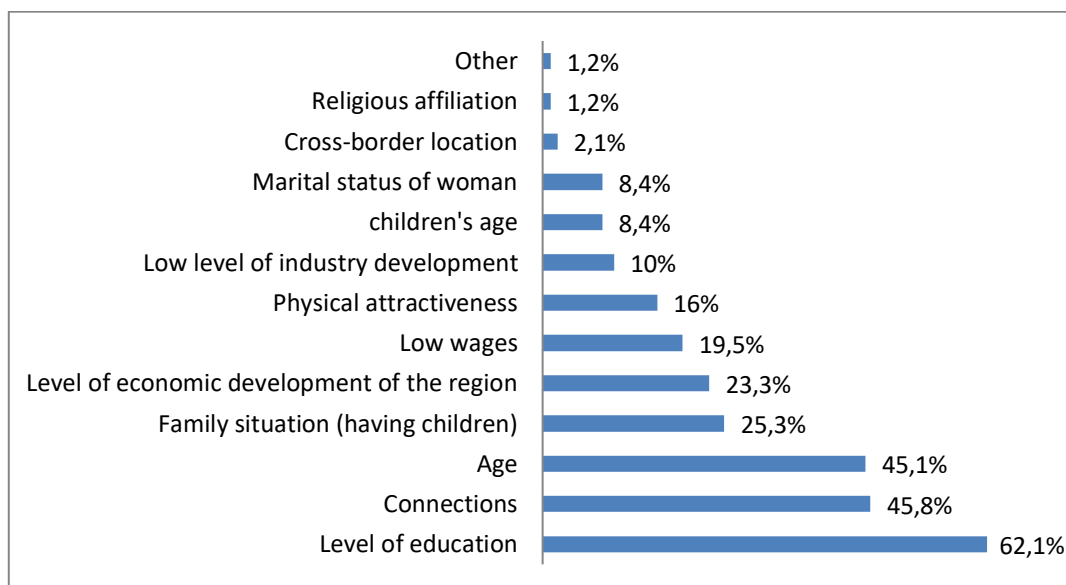


Figure 2: Factors specific to the labor market of Podlasie determining the employment of women (author's own work)

Among participants of the study 62.1% declared that a deciding factor influencing the employment of women is their education level followed by personal connections recognized in the opinion of 45.8% of respondents. 45.1% of participants claimed that age is an important issue and 25.3% made reference to family's situation related to having children, 23.3% indicated the region's degree of development and 19.5% lower pay levels than in other Voivodeships. 10% referred to the low level of industrial development, 16% mentioned that gaining employment depended on the physical attractiveness of a woman and 8.4% focused on issues connected to the marital status of women and the age of their children. Other reasons indicated included: the proximity of the region to the border, religious affiliation, diligence, competence

and experience. Taking under consideration the future of the labor market greater presence of working women is exceptionally important. Development and effective utilization of the economic potential of women are crucial to the future of the Podlasie Voivodeship. It is also important to show women their immense potential in regard to starting their own initiatives and businesses. Significant is the creation of programs which will allow women to reconcile their family related and professional responsibilities. Entrepreneurs from the Podlasie Voivodeship point to the following factors stimulating the situation of women within the region:

- Relatively low costs of maintenance in comparison to other regions;
- Market changing from one being favorable to the employer to one favorable to employees increasing their bargaining power;
- The process of disappearing borders between typically male and female occupations;
- Higher level of education of women in comparison to men;
- A system of benefits equalizing the rights of men and women on the labor market.

In the opinion of employers conducting an assessment of the labor market solely from the perspective of women is incomplete. All employers, regardless of the sub-region they represent, point to the fact that the problem of employees' sex is losing its importance within the market even though some new market processes may, to a lesser or greater degree, influence women or men. Employers clearly underline the extensive changes which have occurred on the labor market in the last several years. It has become an employee market rather than an employer market. Demand for workers exceeds supply. Of course, in regards to perspective employees it is an advantageous situation. This concerns women as well. However, it has been noticed that the profile of the workers waiting for employment does not fit the needs of employers. However, even with the existence of such disproportions the advantage remains on the side of the employees. A low supply of workers forces employees into accepting the fact that they may have to train and invest in the labor force. The bargaining power of employers is decreasing. Proof, according to employers, that the problem of employees' sex is becoming less relevant is the disappearance of differences between what are considered typically male and typically female occupations. More and more women become engineers and gain employment in industries previously dominated by men. The level of trust which employers put in women doing work which in the past was considered to be a man's job is growing. Of course reaching this point took time but currently it is not a source of doubts or controversy. The system of social benefits which balances the rights of men and women on the labor market also speaks in favor of women. Men take advantage of leaves provided for child-rearing and some of them also take paternity leaves. A partnership model which is becoming more common today translates into sharing child-care and family responsibilities. And although this process is progressing it cannot yet be called advanced. Employers draw attention to the fact that women more often are better qualified as employees than men – they are better educated, more knowledge oriented and are more willing to continue their education. Within the labor market knowledge is becoming increasingly important which, of course, has a positive influence on the image of women. However, employers also see factors which negatively impact the situation of women on the labor market of Podlasie. The most important of these include:

- Low salary levels in Podlasie in comparison to other regions;
- Influx of cheaper labor from abroad;
- Having to work in a social consciousness full of stereotypes about women;
- A growing gray market economy;
- Inadequate educational system in respect to the needs of the labor market;
- Increased demand for blue collar and entry level workers;
- Lower salary levels for women in respect to men.

Employers mostly agree with the fact that the salary levels in the Podlasie Voivodeship is lower than in other regions which often causes workers to seek employment not only abroad but also in other areas of Poland. This also concerns professions which are typically female such as accountants. They stress, however, that this is a certain kind of a generalization since salary levels depend on the type of work being performed and position being held. Currently most job offers are for blue collar and entry level workers which does not fully suit the potential of women who are increasingly better educated. Lack of workers on the local labor market forces employers to become more willing to reach for employees from abroad, especially for those from Belarus and the Ukraine. Immigrants are mostly employed for blue collar and entry level work but not only. There are some who come are better educated and possess specialized skill for which there is a shortage on the regional labor market. Immigrants create a growing competition for the local labor force in respect to professions which are scarce. It has been noticed that access to foreign workers is becoming easier and administrative limitations are disappearing. A barrier which undoubtedly reduces the potential of women on the labor market is the still prevalent stereotype that a woman's position on that market is more difficult and that in a working environment women are not treated on par with a man. According to employers the stigmatizing effect of these opinions harms women and creates an untrue picture of the labor market. Taking under consideration certain events the reinforcement of women's position on the market is very important and there is considerable improvement. The education system currently working in the Podlasie Voivodeship which does not fulfill the needs of the labor market is an additional factor working against women. Too much emphasis on higher education and at the same time neglect of vocational training created large disproportions between the expectations and needs of employers and the skill set of potential employees. This situation has caused a shortage of qualified female workers such as seamstresses, well trained cooks or hotel workers. Employers believe that blue collar and entry level work functioned within social consciousness as something worse and the consequences of this can be seen now when there is a lack of qualified production workers. Employers do not fully agree that in Podlasie women earn less than men. They justify their claims by describing the situation occurring in their own businesses. Statistics which are unfavorable to women are based on:

- Smaller share of women holding management positions;
- Lower determination of women in respect to asking for raises.

Employers agree that at the beginning salaries are the same regardless of gender but during employment are subject to changes which depend on numerous factors including personal considerations. Employers agree that there are certain factors which create differences on the labor market between men and women but that they are conditioned on personality, psychological and physiological traits characteristic to individual sexes. As employees women are characterized by:

- Greater adversity in reconciling responsibilities to the family and work;
- Better task orientation;
- Reduced ambitions for advancement;
- Greater attachment to a place of work than of men as well as smaller mobility;
- Greater absenteeism from work when compared to men connected to pregnancy and child care;
- Physical traits making them better suited to precision work.

Employers agree as to the fact that women have better work organization skills than men. In a traditional society women are more responsible for child care and the organization of family life which forces them to be more systematic.



It has been mentioned, however, that the prevalent social tendency is moving toward equal rights with more social roles assigned previously to women being taken over by men. Women are more task-oriented. It is the result of their organizational skills. An accumulation of chores demands quick reaction. For an employer time is very important and workers who possess such abilities are especially desired.

## 5. CONCLUSION

Regarding working women:

1. Working women have numerous needs connected to education, economy and society as well as those related to running their own business which must be fulfilled to support them and their families.
2. Working women participate in large numbers in various forms of improving their professional qualifications (74.4%) financing it mainly using their own resources (61.2%). Few of the women participating in the study received funding from European Union programs (13%) or from employers – full (11.7%) or partial (5.6%).
3. Most working women (89.3%) feel the need for continued education and improvement of professional qualifications. They show the most interest in specialized courses and training (58.8%), language courses (45.1%) and post-graduate studies (30.5%).
4. Women on the labor market of the Podlasie Voivodeship are better educated than men, a fact that is confirmed by statistics of the Central Statistical Office of Poland (GUS).
5. Working women less frequently utilized the support provided by public institutions and non-governmental organizations (20.9%). They mainly made use of financial aid (11.2%) as well as the possibility to take part in training (7.4%) and professional internships (6.7%).
6. Most working women claimed that high taxes and social insurance dues (ZUS) negatively influence the development of entrepreneurship. This opinion was presented by 57.0% of respondents.

Concerning employers:

1. Employers indicate the process through which the differences between occupations thought to be typically male and typically female are disappearing.
2. Employers are searching for workers who fulfill their expectations – their gender is meaningless.
3. Women are more desirable than men when it comes to doing work that is more precise and demands greater patience.
4. According to employers the vocational education system does not fulfill their needs. This concerns work done by women in, for example, the undergarment industry.
5. In connection with the shortage of workers on the local market of Podlasie regional employers declare a desire to hire employees from abroad. It also concerns women.
6. Employing women employers keep in mind their eventual absence resulting from pregnancy or child care. They do not treat this as a factor which reduces the attractiveness of women on the job market.
7. Employers perceive the potential of women as various level managers but stipulate that women are not interested in holding such positions resulting from their greater focus on family life.
8. Employers do not discriminate women in regard to their salary levels but see a greater docility of women in respect to voicing their financial demands in comparison to men.
9. Local entrepreneurs point out that although slow (but noticeable) the processes equalizing the female and male roles progress which is exemplified by the rising percentage of leaves taken by men connected to child care.

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## KNOWLEDGE MANAGEMENT IN THE WEALTH OF INFORMATION TECHNOLOGY

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### **ABSTRACT**

*The large daily amount of new data, information and knowledge means that fast access to those that are critical for individual organization is of utmost importance for a competitive advantage. Knowledge management is the key factor in achieving this goal and consequently in a development of a successful organization. This approach to handling organisation's knowledge assets includes various elements and processes and has several supportive infrastructure elements, one of them being information technology. Implementation of knowledge management nowadays implies, or is even unimaginable without the use of at least some of this technology. Because of its importance, there is a wealth of information technology solutions for knowledge management aimed at various purposes and types of organizations, covering some aspects or offering integrated solution. This paper gives an overview of literature covering the research of use of information technology for knowledge management. It also gives a presentation of available information technology according to knowledge management processes related to knowledge creation, acquisition, storage, sharing and application, as well as according to other criteria, such as size of the organization and information technology aspects. Described elements for information technology categorisation are put into mutual relation. Various possibilities and benefits that information technology provides for knowledge management, and taking into account combination of aforementioned criteria should guide the knowledge management system development in an organization. Approach to each organization as an individual with its own specificities is a path to a solution that will enable optimal information technology support for managing knowledge.*

**Keywords:** *Information Technology, Knowledge Management, Knowledge Management Processes, Knowledge Management System*

### **1. INTRODUCTION**

Organization success on the market depends on many factors and its decisions and actions to ensure it are influenced by knowledge that it possesses. For that reason knowledge in organization should always be relevant and up-to-date. The importance of organizational knowledge and knowledge management (KM) is also emphasized with the inclusion of clause about organizational knowledge into new version of Quality management systems – Requirements standard, ISO 9001:2015 that demands for it to be determined and managed and defines it as a knowledge that is specific to the organization, used and shared with the purpose

to fulfil its goals, usually acquired by experience and based on internal or external sources (Kahler, Gross, Bredehorst, Ulrich, 2016, p. 9). It is well known that definition of knowledge requires definition of data and information and that it is much broader and richer and includes »experience, values, contextual information, and expert insight« (Davenport, Prusack, 2000, p.2-es), although there are many existing definitions. For KM there are also numerous definitions, either in general or for specific fields, and according to most used words in those definitions it includes processes of creating, managing, sharing and using organizational knowledge and information (Girard, Girard, 2015, pp. 13-14). Provision of organizational knowledge are enabling aforementioned KM processes with the use of various mechanisms and technologies, where information technology (IT) plays an important or even critical role. Many applications and solutions for all or part of KM processes are developed and organizations should carefully consider which to choose. This paper is structured as follows. In Chapter 2 is given an overview of previous research of importance and impact of use of IT for KM. Chapter 3 connects KM processes with IT and its categorizations. Additional criteria that influence IT selection, as well as focus of research about influence of IT on KM is presented in Chapter 4. Chapter 5 concludes the paper.

## **2. BACKGROUND**

There is many scientific literature that studies all phases and/or components of KM from various aspects, one of them being IT. Actually, IT is considered to be in main focus of a first (1992-1995) of three phases of KM development, second (1995-2002) being human and cultural dimension, and third (from 2002) taxonomy development and knowledge storage (Koenig, 2004; referenced by Milanović, 2010, p. 197). Stankosky Knowledge Management Framework identifies technology as one of four pillars of KM, along with organization, leadership and learning (Stankosky, Badanza, 2000; referenced by Ternes, 2012, pp. 35-36). Recent research showed that of those four pillars, only organization in its current form is questionable, and others are still important in modern KM frameworks (Ternes, 2012, pp. 154-168). Even more, another research showed that all of sixteen proposals of KM enablers between 1996 and 2004 (approximately second phase) that were analysed included technology dimension (Theriou, Maditinos, Theriou, 2011, 103). Davenport and Prusak (2000, p.2-es) state that network computers can be knowledge enablers with capabilities of communication and storage they have, but that IT itself is dependent on corporate culture and is not by itself the source of sustainable competitive advantage, because it is generally available. Considering that IT is one of KM dimensions, it has a supportive role for generation, codification and transfer of knowledge »through the speed, memory extension and communication facilities« (de Carvalho, Ferreira, 2001). Additionally, with Web 2.0 technologies and cloud computing in the service of KM, expectance of employee contribution is emphasized and human factor plays even greater role (Sultan, 2013, p. 164). IT can be implemented in knowledge management system (KMS) successfully, but also unsuccessfully. Schmaltz, Hagenhoff and Kaspar (2004) evaluate and suggest implementation solutions for existing IT tools for KM according to five criteria: cross-platform accessibility, flexibility of integration, variability of presentation, overcoming language differences and access control. The research of the role and impact of IT system implementation into KMS in the scope of five previously identified gaps (Lin, Tseng, 2005; referenced by Tseng, 2008, p. 151), that included four case studies and a survey, identified that IT by itself cannot become a solution and that people are the key of successful implementation (Tseng, 2008, pp. 159-160). This is also supported by research results of López, Peón, and Ordás (2009, p. 124) that show that IT competency (including IT knowledge of employees, IT operations and IT infrastructure) has positive effect on KM and its processes, indicating that knowledge strategy should precede IT strategy. Also, IT is more adapted to managing explicit knowledge (codified, easily formalized and transferrable) and can represent a potential danger

for mismanagement and loss of valuable tacit knowledge (personal and difficult to express and formalize), if organization does not put additional efforts to preserve it (Johannessen, Olaisen, Olsen, 2001, pp. 14-15). IT is, therefore, an important factor in KM because it connects people (through formal and informal communication) and processes for managing knowledge in a complex ensemble. But it is also just one of important dimensions and cannot be successfully implemented without human effort. One of most distinguished experts on KM, Thomas H. Davenport in his blog for Wall Street Journal claimed in 2015 that KM is gasping for breath and that some of the reasons are: concentration of companies only on technology for KM; Internet search for external knowledge, while forgetting for internal knowledge; and lack of incorporation of data analytics (Davenport, 2015). 2015 Knowledge Management Priorities Report from American Productivity & Quality Center (APQC, 2015, pp. 2-5) corroborates that data analytics do have low priority, but also states that organisations are expecting its larger impact in next three years, together with Big Data, gamification, semantic technologies and machine learning. According to this research, top three supporting technologies that should be invested in are implementation of knowledge capture and transfer, lessons learned databases and mobile applications for content and collaboration (APQC, 2015, p. 3). Web 2.0 technologies, especially social networks, are also very important tool for support of collaboration and knowledge sharing (Becerra-Fernandez, Sabherwal, 2010, pp. 240-243), as well as for increasing organizational added value (Roblek, Pejić-Bach, Meško, Bertoneclj, 2013, 561-564).

### **3. CONNECTION OF KM PROCESSES AND IT**

The wealth of tools and systems developed for KM or applicable to support it naturally leads to their categorizations. Those categorisations are proposed according to various criteria and support various KM processes.

#### **3.1. KM processes supported by IT**

IT is often analysed according to its support of various KM processes. This processes usually refer to two types of knowledge, tacit and explicit (Hendriks, 2001, p. 65). A well-known knowledge conversion model with four modes of conversion between tacit and explicit knowledge that was developed by Nonaka (1995, pp. 18-19) is supported by four processes:

- socialization – from tacit to tacit knowledge;
- combination – from explicit to explicit knowledge;
- externalization – from tacit to explicit knowledge;
- internalization – from explicit to tacit knowledge.

Connected to knowledge conversion are also sets of KM processes that support KM in organizations and, depending on various authors, usually include three to six processes for which are used following names: knowledge identification, growth, creation, discovery, learning, acquisition, capture, collection, codification, encapsulation, transformation, converting, classification, storage, preservation, protecting, maintenance, sharing, distribution, dissemination, diffusion, transfer, communication, monitoring, personalization, manifestation, access, application, exploitation, sourcing, use and justifying (Henderson, 2001, p. 67; Wei, Yeganeh, 2013). According to this list, it is clear that various proposals for integrated set of KM processes can differ significantly, but also that many of them have similar meaning. For example, Becerra-Fernandez and Sabherwal (2010, pp. 56-62) divide them into four groups mostly referring to processes from knowledge conversion model:

- knowledge discovery – creation (and codification and storage) of new knowledge with subprocesses of combination and socialization;

- knowledge capture – acquisition (and codification and storage) of existing knowledge with subprocesses of externalization and internalization;
- knowledge sharing – sharing and transfer of knowledge with subprocesses of socialization (tacit knowledge) and exchange (explicit knowledge);
- knowledge application – use of knowledge with subprocesses of directions (instructions, guidelines) and routines (procedures, rules, norms).

After studying other approaches, Dalkir (2005, p. 43) suggested an integrated KM cycle with three major stages (processes):

- knowledge capture and/or creation;
- knowledge sharing and dissemination;
- knowledge acquisition and application.

López, Peón, and Ordás (2009, pp. 112-113) divide KM processes into knowledge generation, knowledge transfer and knowledge codification and storage. Hawajreh and Sharabati (2012, p. 104) divide processes into five groups for the purpose of their research on how they are influenced by IT: acquiring, creating (generating), transferring, sharing, applying (implement). Another research about influence of IT on KM processes differs from knowledge creation, acquisition, organization, sharing and implementation (Allahawiah, Al-Mobaideen, Nawaiseh, 2013, p. 237).

### **3.2. Categories of IT for KM**

Support of various KM processes is usually the criterion for categorisation of IT, but also other criteria can be applied. This results in various categorisations and potential users can benefit from different perspectives. De Carvalho and Ferreira (2001) analysed a sample of tools that support any of the knowledge generation, codification or transfer process, proposed ten categories and described them according to role in Nonaka knowledge conversion processes:

- Intranet-based systems – combination;
- electronic document management – combination;
- groupware – externalization, socialization;
- workflow – externalization, combination;
- artificial intelligence-based systems – externalization;
- business intelligence – combination;
- knowledge map systems – socialization, combination;
- innovation support tools – internalization, combination;
- competitive intelligence tools – combination;
- knowledge portals – socialization, externalization, combination.

According to their division of KM processes, Becerra-Fernandez and Sabherwal (2010, pp. 62-66) put IT into categories according to their support of four broad groups of systems:

- knowledge discovery systems – data mining, databases, Web-based access to data, lessons learned systems, videoconferencing...;
- knowledge capture systems – expert systems, lessons learned databases, communication technologies, artificial intelligence based knowledge acquisition...;
- knowledge sharing systems – videoconferencing, team collaboration tools, Web-based access to data, databases, lessons learned systems, expertise locator systems...;
- knowledge application systems – decision support systems, troubleshooting systems, enterprise resource planning systems, management information systems...

In a similar manner, Dalkir (2005, pp. 217-245) categorises KM tools according to his integrated KM cycle as:

- knowledge capture and creation tools (content management systems, data mining and knowledge discovery, blogs...);
- knowledge sharing and dissemination tools (communication and collaboration technologies – groupware, videoconferencing, forums; networking technologies...);
- knowledge acquisition and application tools (e-learning, expert systems, knowledge maps...).

On the other hand, Schmaltz, Hagenhoff and Kaspar (2004) do not categorise IT tools directly based on the support for KM processes, but according to their function in KMS:

- publication, structuring, linking (content management systems, text mining tools, knowledge bases...);
- integration of external knowledge (reporting tools, data analysis tools...);
- search and retrieval (search engines, push tools...);
- presentation of knowledge (visualization tools, knowledge maps...);
- communication and cooperation (intranet, groupware...);
- administration (statistical evaluation tools, content analysis tools, user management tools...);
- knowledge transfer (e-learning, blended learning...).

Chug, Chug, Punia and Agarwal (2013, pp. 691-692) give a list of IT that, according to their opinion, can contribute to KM: Intranet, document management systems, information retrieval systems, groupware and workflow systems, brain storming applications, data warehousing and mining tools. Wei and Yeganeh (2013), on the other hand, divide IT into IT tools, technology, organization information, IT accessibility for employees, IT support, IT skill and IT infrastructure and investment.

#### **4. IT SELECTION BEYOND KM PROCESSES**

It is obvious that most thorough IT categorizations are proposed based on KM processes and knowledge conversion model. Organizations can choose all or some processes to be supported to a certain extent with IT. During the selection process, other criteria can be taken into account, although their impact is not well investigated.

##### **4.1. Which criteria can influence IT selection**

Selection of tools and systems that will support KM in organization is often not simple. For example, small organization with one office and large multinational company will have different approaches to storing organizational knowledge. Becerra-Fernandez and Sabherwal (2010, pp. 258-268) propose several criteria that can help in selection of important KM processes and subprocesses and then in selection of appropriate IT tools and systems:

- task characteristics - uncertainty, independence;
- knowledge characteristics – tacit/explicit, procedural/declarative;
- organizational characteristics – size, strategy;
- environmental characteristics – uncertainty.

The same authors (Becerra-Fernandez and Sabherwal, 2010, pp. 46-48) also indicate that several aspects of IT are also of importance: reach (access and connection – e.g. Intranet), depth (detail and amount of information – e.g. knowledge base), richness (multiple cues, multimedia and natural language – e.g. Skype) and aggregation (multiple heterogeneous sources – e.g.

enterprise resource planning (ERP) system). Another set of criteria that should guide IT for use in KM is given by Denning (2002, p. 59). Although he identified those criteria 15 years ago, they are still relevant due to connection to human resources and general technology requirements: responsiveness to user needs, following the changing needs of users, content structure and quality requirements, handling narrative, integration with existing systems, embedding knowledge sharing, scalability, hardware-software compatibility and synchronization of technology with user capabilities.

Interesting approach to framework for selecting KMS of Greco, Grimaldi and Hanandi (2013) is based on Analytical Hierarchy Process (AHP) and suggests four criteria with additional subcriteria, where first criterion is obviously connected to KM processes and second to IT function:

- knowledge impact (knowledge creation, accumulation, transfer, diffusion);
- application (personalization, collaboration and communication, integration, tracking and monitoring);
- cost reduction (capital expenditures, operating expenditures);
- stakeholder satisfaction (customers, employees, shareholders, suppliers).

Above examples show that proposed criteria try to take into consideration several dimensions and can, of course, represent a basis for different categorisations of IT. KM processes are still in their core, but they enable a layered perspective. A possibility of inclusion of various criteria for selection of IT for KM support shows that each organization should be approached individually. IT can provide many benefits for organization in a sense of knowledge creation, acquisition, storage, sharing and application, but it has to be applied appropriately. As mentioned before, small and large organizations in the same industry and environment differ significantly in the need for IT for support of certain processes. Large companies with offices dispersed globally will need appropriate technology to solve the problem of knowledge transfer (Davenport, Prusack, 2000, p.2-es), whereas small organizations do not have such problem. Large organizations will need fully-featured content management systems and large databases, whereas small organizations can use simple and freely available services, such as Google Drive or Dropbox. Two large organizations in the same sector that have different strategies, for example continuous innovations and branding versus generic products, will also have different IT for KM needs. The first one will need IT to support knowledge discovery and creation processes, and the other support for existing knowledge acquisition. Of course, with continuous emergence of new technologies, especially Web 2.0 and Web 3.0 and their support for knowledge conversion model and knowledge sharing, as well as new semantic technologies, possibilities for KM processes support are even more versatile and easily available (Ivanova, Ivanova, 2009, pp. 11-17).

#### **4.2. What takes into account research about IT influence on KM**

A lot of research has been done on influence of IT on KM, but very little take into consideration IT that organizations actually use and connect it with aforementioned criteria. Authors mostly conduct research only according to specific industry sectors and/or country or area, which, of course, has effect on IT used, and IT influence on KM can largely depend on specific systems and tools, as well as other criteria. Research by López, Peón, and Ordás (2009, pp. 118-121) that showed that IT competency positively influences KM processes was conducted on middle-sized and large Spanish organizations from various sectors that intensively use technology. The sample was not significantly different from the population regarding size and sectors, but difference in influence according to those two factors was not investigated. Hawajreh and Sharabati (2012, pp. 105-106) concluded that IT and specifically IT type and technical capabilities have positive influence on KM practices (processes) in industrial companies from



various fields in Jordan, that were selected randomly of those listed at Amman Stock Exchange Market. Authors didn't provide technology types or included other possible criteria, such as number of employees. Another research that was conducted on different industries in China showed, among other, that not only IT resources, but also technical and managerial skills, as well as relationship between IT and business units positively influences KM capabilities (Mao, Liu, Zhang, Deng, 2016, p 1069). Organizational size and age and information system age were used only as control variables. Research about the role of IT in agriculture KM that was conducted by Vipinkumar, Athora and Mini (2013, pp. 507-527) was concentrated on problems of developing countries and their adoption of agricultural knowledge and information system for rural development. Egbu and Botterill (2002, pp. 128-131) investigated construction domain in UK by interviewing employees from 40 organizations about usage and effectiveness of various technologies for KM, but they did not analyse information about organization size and turnover that they also gathered. Their research, however, produced a ranking of IT according to use and effectiveness. Research in Croatian organizations of all sizes that showed moderate influence of IT on KM specifies that difference in size of those organizations represents a limit due to their differences in KM approach that was not investigated (Milanović, 2010, p. 209). Also, Wei and Yeganeh (2013) state that limits of their research of effect of their seven IT categories on KM processes (all but IT support had effect) in Malaysian telecommunication organizations are use of cross-sectional data and no use of moderating variables. More information can provide research conducted for specific organizations, such as exploration of impact of IT on KM in Arab Potash Company from Jordan (Allahawiah, Al-Mobaideen, Nawaiseh, 2013, pp. 236-237). Also, some research about specific criteria connected to IT and KM can be found. For example, Moreno and Cavazotte (2015, pp. 360-369) conducted research among individuals working in different size public and private organizations in Brazil on how job characteristics and work context influence KMS use and participation in KM processes. It is obvious that research about IT effects on KM aspects and processes is mostly concentrated directly to connection of IT and KM and rarely takes into equation additional criteria that was discussed above. Authors do acknowledge that lack of these criteria is a limit to research, but they are not inclined to include them.

## 5. CONCLUSION

IT is considered as an important part of KM from its beginning. Even more, it was initially in the main focus of KM implementation. Over years, IT support role is more accentuated, but it is still critical for KM success. Literature used in this paper covers research mostly from last seventeen years, in which time the role of IT in KM was continuous, but changed with the change of technology. It can be observed that research interest was probably smaller from approximately 2005 until 2008, but in last couple of years is gaining a lot of intention. KM processes are comprising various manipulations of knowledge and are main initiator of selection and use of IT. Categorizations of IT for KM are also proposed in such a way that they are directly or indirectly influenced by KM processes. This direct link is broadened with variety of other criteria that have to be taken into account during KMS development. Each organization is an individual that has its own unique combination of those criteria and should be looked at as such. Some organizations will need simple tools and some complex KMS, but the KM processes they support should be a starting point. It is not necessary that all processes are supported or that they are supported in full. But it is essential that this support meets the real needs of an organization. Unfortunately, research about IT influence on KM mostly does not take into account specific technologies or technology categories that are used, as well as other mentioned criteria. Therefore, more effort should be put into investigation of this specific criteria and beyond KM processes. The wealth of IT that is available for use in KM support does not guarantee by itself that it will be successfully implemented. Employees are crucial

factor of organizational knowledge and with the development of new technologies are more included into KMS development process. Synergy of people and technology that supports their knowledge and that is appropriate for use in individual organization according to its specificities will give optimal means for achieving a competitive advantage.

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## ACCOUNTING RECORDING OF CHANGES OF INCOME TAX IN REPUBLIC CROATIA AND THEIR IMPACT ON PERSONAL CONSUMPTION

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### **ABSTRACT**

*The most important income of each country are taxes. Income tax, together with excise duty, profit tax and value added tax make up the majority of the country's tax revenue. Since the professional and political discussions give to the income tax gives (too)much attention, it is subject to frequent changes. The goal of changes in personal income tax is to increase personal consumption, which makes 60 to 70% of GDP, which results in an increase of GDP. The Croatian tax system distinguishes several categories of taxes: state taxes, county taxes, city or municipal taxes, joint taxes, gambling profit tax and gambling bonuses, as well as fees from the established value of the prize pool funds. Income tax falls into the category of common taxes, ie that tax is partly part of the state budget, part of the counties budget and the city/municipalities or part of the city/municipality budget. The Law on Financing the Units of Local and Regional Self-Government determines exactly in which proportions income tax is distributed. Thus, 60% of income refers to the income of the city / municipality, 16.5% represents the share of the county while the share for decentralized functions is 6%, the share of the call for decentralized assistance calls for 16%, and the share of assistance for projects co-financed by the European Structural and Investment funds 1.5%. It is also important to note that cities, municipalities and counties (including the City of Zagreb), which, according to special laws, finance decentralized functions, have the right to an additional income tax share of 1.9% (primary education), 1.3 % (secondary education), 0.8% (social welfare) and 1% for health and public fire brigade units. Any change in personal income tax should be communicated to the accounting departments of the company so that there will be no mistake when calculating and recording the obligations resulting from employee salaries calculation. The purpose of this paper is to compare income tax changes over the last five years in Republic Croatia and to show the accounting recording thereof, with an analysis of the impact on personal consumption of the changes carried out.*

**Keywords:** *accounting recording, budget, income tax, personal consumption*

### **1. INTRODUCTION**

Income tax is one of the more generous taxes in the tax system of the Republic Croatia. In 2015, this tax accounted for 3% of total tax revenue. The aforementioned tax is also the regular income of the state because it is continuously collected and is a joint income of central and local governments and budgets of local and regional self-government units. The Act on the Financing of Local and Regional Self-Government Units determines the distribution of the percentage of income tax. (Zakon o financiranju jedinica lokalne i područne (regionalne) samouprave, 2017.).

Income tax is taxed exclusively by natural persons. This is a direct tax, ie there is no possibility of overdue income tax. This tax is taxed by six sources of income: income from employment, income from self-employment, income from property and property rights, income from capital, income from insurance and other income. . (Zakon o porezu na dohodak, 2015). The most productive source of income tax is the income from employment. A taxpayer is a person who generates income taxable, he may be a resident and a non-resident. A resident is a natural person who has a permanent or habitual residence in the Republic of Croatia. A resident is also a natural person who does not have a permanent or temporary residence in the Republic of Croatia and is employed by the state service of the Republic of Croatia and on that basis receives a salary. The non-resident pays income tax realized in the Republic of Croatia, and has no permanent residence or usual residence in the Republic of Croatia. (Hrvatski porezni sustav, 2016.).

## **2. CHANGES OF INCOME TAX IN THE REPUBLIC OF CROATIA IN THE LAST FIVE YEARS**

In the last five years there have been three significant changes to the Income Tax Law. So it is in effect since 01.03.2012 the Income Tax Law amended the basic personal deduction and tax grades . (Zakon o porezu na dohodak, 2012). The basic personal allowance for taxpayers and retirees is increasing, the tax categories are changed, taxation of dividend income and share of profit on the basis of the share of capital are introduced, the taxation of pensions of resident abroad is introduces. Law, also, prescribes an additional requirement for taxation of receipts from agriculture and forestry activities (in application since the beginning of 2013). Existing tax rates (12%, 25% and 40%) remained the same, but tax classes were changed. Thus, the tax rate of 12% used a monthly tax base of 2.200,00 kn, a 25% rate on the monthly tax base above 2.200,00 to 8.800,00 kn, while the rate of 40 percent applied to a monthly tax base above 8.800,00 kn. It is defined when the taxpayer, who carries out the independent activity of trades and trades of equal activities, as well as the activity of agriculture and forestry and is not a taxpayer of value added tax (with effect from the beginning of 2013), income and income tax can be determined in the lump sum. With changes of the Income Tax Law, which entered into force on 01.01.2015, personal allowance increases and tax classes are changed. The 12% tax rate applied to the monthly tax base of up to 2.200,00 kn, a 25% tax rate on the monthly tax base above 2.200,00 kn to 13.200,00 kn while the tax rate of 40% was over 13.200,00 kn per month tax base. Also, as of 1.1.2015, the reliefs for the assisted areas and the town of Vukovar increase. Interest rate taxation (with restrictions) is introduced at a rate of 12%. Income from income tax on interest on savings is the revenue of the country budget. As aforementioned changes to the law, the non-dividend dividend and the share of the profit on the basis of the share of capital (up to 12.000,00 kn per year) were abolished. (Zakon o porezu na dohodak, 2014). The last significant changes of the Income Tax Act occurred in 2016 and entered into force on 01.01.2017 (Zakon o porezu na dohodak, 2016). With these changes, the amount of the personal allowance increased from the previous 2.600,00 kn (by 2015 the deduction was 2.200,00 kn) to 3.800,00 kn. Tax rates were abolished by 12%, 25% and 40%, and new ones were introduced by 24% (up to 17.500,00 kn) and 36% (above 17.500,00). The basic allowance for children and members is 2.500,00 kn. Also, the coefficients for deduction for children and subsidized members have been altered. All of these changes are shown in Table 1 and Table 2.

*Table following on the next page*

Tax rate	Tax classes in 2012	Tax classes in 2015	Tax classes in 2015
12%	to 2.200,00 kn	to 2.200,00 kn	/
24%	/	/	to 17.500,00 kn
25%	above 2.200,01 kn to 8.800,00 kn	above 2.200,01 kn to 13.200,00 kn	/
36%	/	/	above 17.500,01 kn
40%	above 8.800,01 kn	above 13.200,01 kn	/

*Table 1: Review of tax rates and tax rates in the last five years in the Republic of Croatia (authors)*

Type of personal allowance	Coefficient till 31.12.2016	Amount	Coefficient from 01.01.2017	Amount
Basic personal allowance	1	2.600,00	1	3.800,00
Personal allowance for 1st child	0,5	1.300,00	0,7	1.750,00
Personal allowance for 2nd child	0,7	1.820,00	1	2.500,00
Personal allowance for 3rd child	1	2.600,00	1,4	3.500,00
Personal allowance for 4th child	1,4	3.640,00	1,9	4.750,00
Personal allowance for 5th child	1,9	4.940,00	2,5	6.250,00
Personal allowance for 6th child	2,5	6.500,00	3,2	8.000,00
Personal allowance for 7th child	3,2	8.320,00	4	10.000,00
Personal allowance for 8th child	4	10.400,00	4,9	12.250,00
Personal allowance for 9th child	4,9	12.740,00	5,9	14.750,00
Personal allowance for 10th child	5,9	15.340,00	7	17.500,00
Personal allowance for subsidized member	0,5	1.300,00	0,7	1.750,00
Personal allowance for disability	0,3	780,00	0,4	1.000,00
Personal allowance for 100% disability	1	2.600,00	1,5	3.750,00

*Table 2: The type of personal allowance applied since 1.1.2015 until 31.12.2016 and that which are in use since the beginning of 2017 (authors)*

In order to better illustrate the impact of these tax changes on salary obligations, the salary calculation will be presented in two examples. In the first example (Table 3), the salaries of employees in Split for 2012, 2015 and 2017 will be calculated, with a gross salary of 24.300,00 kn, a subsidized member and two children. In the second example (Table 4), a salary for 2012, 2015 and 2017 will be presented to a single person with a salary of 19.000,00 kn and no subsidized member.

No	Description	Salary calculation					
		Rate % (2012)	Amonut in kunas (2012)	Rate % (2015)	Amonut in kunas (2015)	Rate % (2017)	Amonut in kunas (2017)
1.	<b>Gross salary</b>		24.300,00		24.300,00		24.300,00
2.	Contributions from salary	15	3.645,00	15	3.645,00	15	3.645,00
	– Pension first pillar	5	1.215,00	5	1.215,00	5	1.215,00
	– Pension second pillar						
3.	Income		19.440,00		19.440,00		19.440,00
4.	Pension first pillar		5.940,00		7.020,00		9.800,00
5.	Tax base		13.500,00		12.420,00		9.640,00
6.	Tax	12,25,40	3.794,00	12,25	2.819,00	24	2.313,60
7.	Surtax	10	379,40	10	218,90	15	347,04
8.	<b>Payment to worker – net salary</b>		15.266,60		16.339,10		16.779,36
9.	Contributions on salary	15	3.645,00	15	3.645,00	15	3.645,00
	– for health insurance	0,5	121,50	0,5	121,50	0,5	121,50
	– in case of injury at work	1,70	413,10	1,70	413,10	1,70	413,10
	– for employment						
10.	<b>Total funds required</b>		28.479,60		28.479,60		28.479,60

Table 3: Calculation of salary of employee in Split for 2012, 2015 and 2017, which has two children and a subsidized member (authors)

When calculating salary, wage and salary contributions should be distinguished. Contributions from salaries are contributions for first and second pension pillar (calculated from the gross wage bill) while health insurance contributions, in the case of labor and employment injuries, contribute to wages and they are added to the gross salary. Contributions on salary together with the amount of gross salary give total funds necessary for the payment of salaries.

In 2012, a personal allowance is 2.200,00 kn. Since the observed employee has two children and a subsidized member, his personal allowance is calculated as  $2,7 \cdot 2.200,00$  kn (coefficient 2,7 is obtained by summing the coefficients for two children 0,5 and 0,7, the coefficient for subordinated member 0.5 and the basic personal allowance coefficient 1). The wage tax is calculated in three steps: first at a rate of 12% to 2.200,00 kn, then at a rate of 25% for the difference between 8.800,00 and 2.200,01 kn and then at a rate of 40% on the difference between the tax base (13.500,00 kn) and 8.800,01 kn. By changing the basic personal allowance in 2015, the tax base decreased to 12,420.00 kn. Also, by increasing the class that encompasses a tax rate of 25%, for the observed worker in 2015, a tax rate of 40% is not used. These changes resulted in net salary growth in 2015 by 1.072,50 kn compared to 2012. In 2017, with further tax exemption, the employee's net salary increased by 440.26 kn, despite the fact that the surtax in Split increased from 10% to 15%.

No	Description	Salary calculation					
		Rate % (2012)	Amonut in kunas (2012)	Rate % (2015)	Amonut in kunas (2015)	Rate % (2017)	Amonut in kunas (2017)
1.	<b>Gross salary</b>		19.000,00		19.000,00		19.000,00
2.	Contributions from salary – Pension first pillar – Pension second pillar	15 5	2.850,00 950,00	15 5	2.850,00 950,00	15 5	2.850,00 950,00
3.	Income		15.200,00		15.200,00		15.200,00
4.	Pension first pillar		2.200,00		2.600,00		3.800,00
5.	Tax base		13.00,00		12.600,00		11.400,00
6.	Tax	12,25,40	3.594,00	12,25	2.864,00	24	2.736,00
7.	Surtax	10	359,40	10	286,40	15	410,40
8.	<b>Payment to worker – net salary</b>		11.246,60		11.246,60		12.053,60
9.	Contributions on salary – for health insurance – in case of injury at work – for employment	15 0,5 1,70	2.850,00 95,00 323,00	15 0,5 1,70	2.850,00 95,00 323,00	15 0,5 1,70	2.850,00 95,00 323,00
10.	<b>Total funds required</b>		22.268,00		22.268,00		22.268,00

Table 4: Calculation of gross salary of employee in Split for 2012, 2015 and 2017, who is single (authors)

The observed employee is single and his net salary from 2012 to 2017 has increased by 807,00 kn. The amount of funds required by the employer of the observed employee did not change over the entire observed period and amounts to 22.268,00 kn. The above mentioned calculations, ie the obligations for salaries, should be recorded in the business books. It is necessary to open accounts for the costs of net salaries, contributions from salaries, taxes and prizes and contributions to salaries and, on the other hand, obligations for contributions from salary, income tax, surtax, contributions for compulsory health insurance, labor protection and employment contribution, and ultimately net salary obligations. Since there was no change in the manner of recording of salary costs, Table 5 will show recording for single employee salary (in 2017) from the example shown in Table 4.

Account	Key	Owed	Claimed
Cost of net salary	4201	12.053,60	
Cost of contributions from salary	4221	3.800,00	
Cost of tax and surtax	4211	3.146,40	
Cost of contributions on salary	4231	3.268,00	
Obligations for pension first pillar	2420		2.850,00
Obligations for pension second pillar	2421		950,00
Obligations for income tax	2410		2.736,00
Obligations for surtax	2411		410,40
Obligations for contributions for health insurance	2423		2.850,00
Obligations for contributions in case of injury at work	2424		95,00
Obligations for employment	2426		323,00
Obligations for net salary	2300		12.053,60

Table 5: Accounting recording of salary for single person in Split for 2017 (authors)



### 3. IMPACT OF CHANGES IN INCOME TAX ON PERSONAL CONSUMPTION

On the personal consumption affect many factors, and the most important is disposable income. The disposable income is part of the income that remains to individuals after they have paid all taxes and other obligations. Additionally, the abovementioned amendments to the Income Tax Act were aimed at increasing personal consumption, which represents 60 to 70% of GDP, which would increase the GDP itself, which decreased significantly thanks to, among other things, the reduction of personal consumption as a result the crisis that had affected the Croatian economy. The relief of salary, ie changes of the Income Tax Act, have positively impacted on personal consumption. As the previous two examples show, net salaries for both employees increased in the period from 2012 to 2017. According to the data of the Central Bureau of Statistics, personal consumption in August this year increased by 6.4% compared to the same month last year (Državni zavod za statistiku: prvi podaci – trgovina na malo, 2017). This is faster growth than a month earlier when the consumption increased by 5.9% on year level. Also, in the second quarter of 2017, GDP grew by 2.8% compared to the same period of 2016 (Državni zavod za statistiku: Prva procjena tromjesečnog bruto domaćeg proizvoda za drugo tromjesečje 2017, 2017). The largest positive contribution to increasing the volume of GDP in the second quarter of 2017 was achieved by the growth of final consumption expenditure of households.

### 4. CONCLUSION

Income tax is one of the most significant tax forms of the modern tax system. Income tax is regulated in the Republic of Croatia by the Income Tax Act and by the Ordinance on Income Tax while its distribution is determined by the Law on Financing Local and Regional Self-Government Units. By modifying the law on Income Tax Act, the state can control, ie affect the personal consumption of its citizens, while ensuring that salaries are not increased for the employer. From these examples, it can be seen that the changes in tax classes, tax rates and the change in the amount of personal allowance, the salaries of employees in the last five years have increased considerably (for employees with two children and one subsidized member it increased by slightly over 9.90% a single employee rose by slightly less than 7%). These changes have resulted in an increase in personal consumption and to more than three years in a row. Increasing personal consumption, growth in exports and increasing investment have a positive impact on the changes in GDP, which is also growing this year. However, these positive changes do not delay the need for structural reforms to increase the potential growth rate of the Croatian economy in the medium to long term.

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## OPTIMIZATION OF OVERHEAD COSTS OF A CONSTRUCTION CONTRACT

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### ABSTRACT

*The issue of overhead costs is solved individually within each company. General overhead costs are based on the previous financial year. A plan for next year is created from this data which is reflected in the calculation of each contract. However, it is also important to take into account the type of production, since different types of works are set at different overhead production costs. There are not a lot of scientific references which deal with production overhead costs especially in the construction industry in the Czech Republic. The aim of the article is to optimize overhead costs for different types of productions. The paper focuses especially on the construction production with types of construction works such as roads, bridges, sewerage and others that are further analyzed. In the frame of the used methodology, it is necessary to divide constructions according to the nature of the works with description as accurate as possible. Constructions are divided according to the type of works and especially by the volume of work, as the construction of small-scale works have a problem with overhead production costs more often than companies of larger sizes. All this is presented on the basis of examples from the construction area of bridge, roads, sewerage constructions, etc. The result of the article is to allocate the value of individual overhead costs and provide more precise specification for individual construction contracts for which it is necessary to take account of the character (nature) of construction contracts. Depending on the type of construction, the proper method is used to determine the overhead costs.*

**Keywords:** *Overhead costs, price calculation, overhead production costs.*

### 1. INTRODUCTION

Construction industry is one of the major industries in each country, with substantial investments heading to this sector in each country. After 2008, when the financial crisis caused by the fall of Lehman Brothers Holdings Inc. started, many companies had to focus on their existence on the construction market and a cost-cutting era began. An area where the costs of the construction contract can be reduced is represented by so called "indirect costs". However, determination of these costs, especially for construction companies, is not easy. They are mostly based on a previous accounting period; taking into account the expected changes in energy prices, wage costs, etc. Indirect costs are divided into overhead production and administrative costs. This research focuses on the construction overhead production costs. The issue of overhead production costs and overhead costs in general creates in most companies the difference between the situations whether the companies are able to cover expected costs associated with overhead costs or not, and due to this generate positive or negative economic results.

## 2. LITERATURE REVIEW

### 2.1. Overhead costs

Overhead costs are the charges that cannot be attributed exclusively to a single product or services. (Assaf, Bubshait, Atiyah & Al-Shahri, 2001) There are two types of overhead costs in construction industry: company overhead costs and project overhead costs. This research is limited to the company overhead costs. Company overhead costs are also called general and administrative overhead costs and include all costs incurred by the construction company in maintaining the firm in business and supporting the production process, but are not directly related to a specific project. Company overhead costs are perhaps one of the main reasons why so many contractors are unable to make profit or even to stay in business. Obviously, if the company does not know its true overhead costs, then a failure in recovering these costs results in financial collapse. Company overhead costs vary considerably from time to time mostly from 8 to 15% of the total construction volume. (Assaf, Bubshait, Atiyah & Al-Shahri, 2001)

#### 2.1.1 Overhead production costs

All accrued primary and secondary costs related to the management, operation and service of the production process which are not possible to be determined directly to the object of the calculation or calculation unit may be assigned to overhead production costs (Mesároš, 2003). Overhead production costs can be divided into:

- Technological overhead costs - fuel and energy, material consumption for treatment of the construction site, extra pay for the night work, bonuses and rewards for savings etc.,
- General overhead costs - consumption of material, energy and fuel during modifying and heating offices, sanitary facilities at the construction site, etc. (Mesároš, 2003).

#### 2.1.2. Overhead administrative costs

Overhead administrative costs do not emerge on the construction site, but in different administrative areas. The term "overhead administrative costs" refers to the costs that are not based on construction contracts, but on the overall operation. Thus overhead administrative costs include primary and secondary costs related to the management and administration of the organization, establishment and divisions.

Overhead administrative costs include:

- Consumption of materials, energy and fuel, cleaning and heating of offices, office supplies, etc.
- Advertisement costs,
- Fixed assets depreciation,
- Cost of repairs and maintenance of fixed assets or rent.

#### 2.1.3. Determination of the basis for calculating overhead costs

The basis for calculating overhead costs in construction industry usually consists of direct salary costs without material costs (i.e. direct processing costs) (Mesároš, 2003). The basis for calculating administrative costs consists of direct costs and overhead costs, excluding the costs of materials. The overhead surcharge is defined by the accounting information from the previous period (e.g. a year), for which we know the overhead base (R) and the volume of the overhead costs (R), while the:

$$R = (R_v + R_s) \quad (1)$$

where:

R<sub>v</sub> is production overhead costs

R<sub>s</sub> is administrative overhead costs

Overhead surcharge ( $R_p$ ) is calculated according to the formula:

$$R_p = R/R_z * 100 \quad (2)$$

where:

$R_p$  is an overhead surcharge (in per cent)

$R$  represents the volume of overhead costs in CZK

$R_z$  is the volume of the overhead costs in CZK (Mesároš, 2003)

### 3. RESEARCH METHOD

The research into overhead costs for selected contracts was based on the synthesis and analysis of individual cost items. The research was carried out on the basis of 16 case studies. These studies took into account the amount of overhead administrative and production costs, which is set by a percentage rate out of the allocation base. Therefore this percentage rate is given by the corporate strategy for the whole year and does not reflect the topicality of the construction contract status and the character of the construction contract so the planned amount of overhead costs differs from the actual amount of overhead costs. The actual amount of overhead costs is based on information based on the construction company accounting. At this stage, overhead costs were defined and a comparison between planned and actual overhead costs was carried out. In the following phase of the research, only the overhead costs were analyzed. Overhead production costs were further classified and the total amount was distributed into each cost group. The objective of the whole research is to determine the amount of overhead costs according to the volume of the construction contract and the nature of the construction contract. This implies that the arithmetic average, which represents the average percentage rate for selected construction orders was used in the last part of the research.

### 4. CASE STUDIES

The case study has been demonstrated on 16 selected construction contracts. These construction contracts were defined by the nature of the contracts involving bridge structures with a financial volume between 0.5 million CZK and 10 million CZK (1 Euro = 25.50 CZK), i.e. from 19,610 Euro to 392,160 Euro. The following figures show the selected contracts - the reconstruction of both Kozlov and Stupava bridges. These selected contracts were carried out by the company which represents a larger construction company in the Czech Republic in terms of the turnover and the number of employees and the whole company is divided into 16 divisions. The "bridges" division set the average overhead administrative costs at 4.5% and the overhead production costs at 5% of the sales of contracts implemented in previous years from previous accounting periods. Small-scale constructions which tend to have a problem with overhead production costs were deliberately chosen.

*Figure following on the next page*



*Figure 1 Kozlov bridge before reconstruction and after reconstruction*



*Figure 2 Stupava bridge before reconstruction and after reconstruction*

Of all the invoices and tax documents that were kept in the accounts at the construction sites, the costs were divided into so-called direct costs (material, wages, machines, subcontracts, etc.), overhead administrative costs (bookkeeping, head of centres and management costs, etc.) and overhead production costs (building managers, rental of building cells, accommodation, allowances, tangible fixed assets depreciations, etc.). Table 1 below shows all 16 contracts, their financial volume, the amount of overhead administrative and production costs, and the last part of the table states the income and economic result that was determined by the difference in revenues and costs.

*Table following on the next page*

Table 1 Actual costs and revenues on selected constructions

Ord. num.	Place of realization	Costs [CZK]	Administrative overhead costs [CZK]	Production overhead costs [CZK]	Revenues [CZK]	Profit [CZK]
1.	Dědice	407,653.70	23 640.16	90,532.35	525,336.00	3,509.79
2.	Rybníček - cornice	491,422.75	30,840.75	15,371.25	685,347.48	147,712.73
3.	Stupava - cornice	803,960.00	40,850.58	29,687.62	907,790.76	33,292.56
4.	Kozlov bridge	992,407.43	48,813.19	158,199.52	1,084,733.81	-114,686.33
5.	Mikulovice	2,050,000.18	111,871.71	230,812.49	2,486,036.97	93,352.59
6.	Příseka	7,748,179.40	307,448.88	400,676.20	8,903,917.58	447,613.10
7.	Maloměřice – railway bridge	1,997,268.49	67,851.54	98,313.20	1,997,268.49	-166,164.74
8.	Highway 2 – bridge cornice	9,776,562.55	448,303.23	660,168.69	9,964,216.34	-920,818.13
9.	Dobročkovice - bridge	5,888,496.86	267,263.30	634,440.00	5,888,496.86	-901,703.30
10.	JHM – a intendancy of bridges	2,400,900.16	159,105.73	477,314.59	3,535,678.65	498,358.17
11.	Brno Tuřany - bridge	8,877,707.25	479,333.52	855,984.26	10,651,849.27	438,824.24
12.	Paclavice - bridge	5,480,606.85	252,912.30	141,644.24	5,620,273.16	-254,890.23
13.	Move the stop - Kozí Horka	2,078,182.18	110,018.36	239,385.75	2,444,851.16	17,264.87
14.	Štěpánov - bridge	4,098,730.17	203,938.74	571,263.56	4,538,046.55	-335,885.92
15.	Stoky – noise barrier wall	5,436,012.73	273,742.77	596,385.16	6,083,173.72	-222,966.94
16.	Znojmo – repairing noise barriers on the bridge	842,282.57	45,556.09	39,772.36	1,012,355.78	84,744.76

(1 Euro = 25.50 CZK)

Overhead production costs for a large company on small-scale contracts tend to be problematic. Table 2 shows the comparison of planned and actual overhead production costs. Apparently, these overhead costs have a strongly fluctuating character in the small-scale contracts. The largest overhead costs apply at construction no. 1 at 17.23%, the lowest overhead costs at

2.24%, were at construction no. 2. Average overhead production costs were at 9.32%, i.e. by 4.32% more than the planned overhead costs. This increase in overhead costs may cause a difference between profit and loss on a particular small-scale construction, as can be seen from Table 1, where the contract no. 4 was implemented at a loss of CZK 54,645.97 CZK and contract no. 1 was implemented with a zero economic result. Three contracts in Table 2, no. 1, 4 and 10 were implemented with a multiplicity of financial volume covering production overhead costs, and two orders no. 2 and 12 were actually implemented with lower overhead costs than the planned values. It is obvious that the overhead production costs in small-scale contracts vary, so it would be appropriate to carry out a more in-depth investigation into the issue, with a larger number of researched contracts, in which it would be clear by how much the rate of overhead production costs would shift in contracts up to 2.5 million CZK and in large-scale contracts.

*Table 2 Comparison of planned and actual overhead production costs*

Order num.	Place of realization	Plan of overhead production costs [%]	Real overhead production costs [%]	Variance [%]
1.	Dědice	5	17.23	12.23
2.	Rybníček	5	2.24	-2.76
3.	Stupava	5	3.27	-1.73
4.	Kozlov	5	14.58	9.58
5.	Mikulovice	5	9.28	4.28
6.	Příseka	5	3.45	-1.55
7.	Maloměřice	5	6.52	1.52
8.	Highway	5	6.63	1.63
9.	Dobročkovice	5	10.68	5.68
10.	JHM	5	13.50	8.50
11.	Brno Tuřany	5	8.04	3.04
12.	Paclavice	5	2.52	-2.48
13.	Kozí Horka	5	9.79	4.79
14.	Štěpánov	5	12.59	7.59
15.	Stoky	5	9.80	4.80
16.	Znojmo	5	3.93	-1.07
<b>Average</b>			<b>8.38</b>	<b>3.38</b>

(1 Euro = 25.50 CZK)

The following stage of the case study analyses were focused on a more detailed analysis of individual costs that belong to the overhead production costs and on determining the differences between the constructions within the type of cost (see Table 3 below). The left-hand part of the table describes all overhead production costs. In the right-hand part, these costs are always allocated to completed constructions. If this cost was shown on the construction site, it is defined by its financial amount. If any cost has not been shown, it is marked in dark grey colour. Table 3 below clearly shows that if the construction was burdened by the cost of the building manager and the cost of building cells rent, the overhead production costs increased by about 5 to 10%. Construction no. 4 was the only one that did not have the cost of allowances, accommodation and travel expenses. The reason was a sub-contracting way of implementing



the construction. Constructions no. 2 and 3 were the only ones not burdened by the cost of the construction manager. The work of the construction manager, rather a technical supervisor, was carried out by a person from the sales department, an employee who was paid from the overhead administrative costs that are always included in the cost of the construction and were set by the company at 4.5%. A result that can be deduced from this table is that if small-scale constructions are burdened by the costs of the building manager and renting the building cells, there is a high probability that overhead production costs will double or even triple, and the construction can fall from profit to loss within the economic result.

*Table 3 Clarification of variations in a specific construction contracts*

<b>Order Number</b>	<b>Salary of the management of the Centre</b>	<b>Depreciation of tangible fixed assets</b>	<b>Allowances, accommodation, travel costs</b>	<b>Salary of the construction manager + social and health contributions</b>	<b>Rent of building cells</b>
1.	5,516.04	2,364.02	23,088.00	55,119.20	
2.	7,196.18	1,084.00	3,070.00		
3.	8,906.29	4,453.14	7,421.91		
4.	11,389.74	4,881.32		52,730.43	76,986.57
5.	26,103.40	11,187.17	16,408.00	109,030.44	55,622.98
6.	93,491.10	40,067.62	10,426.00	94,899.49	50,008.41
7.	15,832.03	6,785.15	27,245.00	18,308.42	23,614.46
8.	44,830.32	29,886.88	110,792.00	360,473.40	74,717.21
9.	26,726.33	17,817.55	77,150.00	393,972.06	44,543.89
10.	15,910.58	10,607.05	48,810.00	387,556.34	21,214.10
11.	47,933.35	31,955.57	110,545.00	578,428.42	63,911.14
12.	25,291.23	16,860.82	2,400.00	54,940.13	42,152.06
13.	25,670.95	11,001.84	54,345.00	142,200.80	
14.	20,416.37	13,610.92	112,418.00	334,897.00	34,027.29
15.	27,374.28	18,249.52	65,034.00	411,886.52	45,623.80
16.	10,629.75	4,555.61	6,497.00	18,090.00	
<b>Average</b>	<b>25,826.12</b>	<b>14,085.51</b>	<b>45,043.33</b>	<b>215,180.90</b>	<b>48,401.99</b>

*Table following on the next page*

Tools, equipment transfers, etc.	Renting a mobile toilet	Guarding	Overhead production costs in total [CZK]	Volume of the construction contract [CZK]	Overhead production costs [%]	Variance [%]	Order Number
2,445.10	2,000.00		90,532.35	525,336.00	17.23	12.23	<b>1.</b>
342.25	2,679.00		14,371.43	685,347.48	2.24	-2.76	<b>2.</b>
5,937.52	2,968.76		29,687.62	907,790.76	3.27	-1.73	<b>3.</b>
3,371.46	3,454.00		152,813.52	1,084,733.81	14.58	9.58	<b>4.</b>
5,080.80	3,139.59		226,572.38	2,486,036.97	9.28	4.28	<b>5.</b>
16,400.26	2,156.00		307,448.88	8,903,917.58	3.45	-1.55	<b>6.</b>
4,323.14	2,205.00		98,313.20	1,997,268.49	6.52	1.52	<b>7.</b>
20,728.88	5,880.00	12,240.00	660,168.69	9,964,216.34	6.63	1.63	<b>8.</b>
449.67	4,508.00	69,272.50	634,440.00	5,888,496.86	10.68	5.68	<b>9.</b>
2,121.41			486,219.48	3,535,678.65	13.50	8.50	<b>10.</b>
15,977.78	7,233.00		855,984.26	10,651,849.27	8.04	3.04	<b>11.</b>
			141,644.24	5,620,273.16	2.52	-2.48	<b>12.</b>
2,982.16	3,185.00		239,385.75	2,444,851.16	9.79	4.79	<b>13.</b>
38,115.98	5,978.00	11,800.00	571,263.56	4,538,046.55	12.59	7.59	<b>14.</b>
23,660.05	4,557.00		596,385.16	6,083,173.72	9.80	4.80	<b>15.</b>
			39,772.36	1,012,355.78	3.93	-1.07	<b>16.</b>
<b>10,138.32</b>	<b>3,841.80</b>	<b>31,104.17</b>	<b>321,562.68</b>	<b>4,145,585.79</b>	<b>8.38</b>	<b>3.38</b>	<b>Average</b>

(1 Euro = 25.50 CZK)

## 5. RESULTS

From the above-mentioned case studies, it is clear that the actual costs incurred within the overhead production costs are almost always different from the plan. Therefore it is essential to identify these incurred costs and project them into other planned overhead rates for the sake of more precise construction contract management as well as of the whole construction company. From the tables above, it is clear that out of 16 case studies, the actual costs reported as overhead production costs were only for 5 of them lower than the planned ones. However, for 11 contracts, the actual costs significantly exceeded the planned overhead production costs, which had a negative impact on the level of economic result. Therefore, it is necessary to extend the number of construction contracts in the framework of further research so as to be able to set the average level of the percentage rate of actual costs spent on overhead production costs and to use this percentage rate for further planning of future contracts in order to avoid negative impacts on economic result.

## 6. CONCLUSION

The aim of the article was to optimize the overhead costs of the construction contracts. For this optimization, only overhead production costs were selected for more detailed investigation. 16 case studies were used for the research, pointing at the differences between the planned values and actual overhead cost values. These case studies focused only on the reconstruction of bridge constructions. All case studies belonged to the financial volume of a small-scale range of work, from 0.5 to 10.0 million CZK. After evaluating all the outputs shown in the tables, it was confirmed that the overhead production costs increased to 10% compared to the planned 5%. This had a negative impact on the economic result, i.e. the loss, in some construction contracts. During the analysis of individual overhead production costs it was found out that in three

constructions, a great impact on the burdening was brought by the cost of the construction manager, which increased the costs by 10.49% within the whole construction works costs. In two constructions, the building cells were used which also burdened the construction costs. For construction no. 4, these costs caused the total loss of the whole construction contract. It can be concluded from the above mentioned facts that it is very important that the actually incurred costs on the overhead production costs (and not only on them) were constantly checked and compared with the planned values in order to refine the entire management of these contracts.

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## PROACTIVE LAW AS A PART OF THE JUDICIARY SYSTEM REFORM IN THE REPUBLIC OF CROATIA

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### ABSTRACT

*This paper aims to indicate limits of curative abilities of the Croatian judiciary system (CJS) and points to the possibilities to improve said system by means of the proactive law (PL). The paper provides an analysis of certain tendencies in the CJS, general information on the PL and a possible positive effect of a wider PL implementation. During the last 5-year period, the CJS records generally lower numbers of unsolved cases, but the number of solved cases relates to the number of new cases. Such results cast doubts on the improvement of efficiency of Croatian judiciary as predominantly curative social instrument. The PL concept is opposite to such reactive model. The PL, sometimes being related to, or considered a synonym for, the preventive law, law as competitive source etc., has recently been supported by the European Economic and Social Committee (EESC) urging a shifting in the existing paradigms. Further local empirical researches have been restricted due to a limited material basis and novelty of the PL concept. The paper contains theoretical support and elementary directions for an effective CJS improvement in practice. Such improvement would have been primarily achieved by means of reducing the inflow of new court cases to the CJS, thus unburdening the CJS itself, allowing its limited capabilities to be redistributed towards an overall speed and quality, rather than quantity only. This paper thus promotes an innovative approach to structural problems of the CJS and the strategy of the CJS reform.*

**Keywords:** *Croatian judiciary system, preventive law, proactive law, reform*

### 1. INTRODUCTION

The Croatian judiciary system (CJS), as a part of the wider national judicial system, has been subject of reforms for years (Ministry of Justice of the Republic of Croatia, 2010, p. 1). Most such reforms, including those intended for the current period, have been envisaged as internal, only few introduce new solutions, and even fewer are external (Ministry of Justice of the Republic of Croatia, 2016, pp. 16-17). While annual statistical data for the 2012-2016 periods indicate considerable CJS improvement, some of the said data, provide doubtful or even warring results (Ministry of Justice of the Republic of Croatia, 2017). Since already undertaken CJS reforms provided doubtful results, a different approach should be reconsidered: the proactive law (PL). In order to introduce international readers to certain present aspects of the CJS, we provide short information on the role of the CJS within the Croatian judicial system, followed by an analysis of the nature of the CJS: which element – curative or proactive, has been its predominant element? Further analysis relates to some other CJS qualities in result of the aforementioned reforms, providing also a basic feedback on the CJS outlooks. Vice versa, Croatian legal community appears to be rather unfamiliar with the PL. Therefore, in order to introduce Croatian readers to the basic PL concepts, we deliver an overview of the said concepts, a report on their local perspective, as well as some proposals for their application in the Republic of Croatia.

### 2. ON THE CJS ROLE, NATURE, QUALITIES AND OUTLOOKS

#### 2.1. On the CJS Role

The CJS has no comprehensive legislative definition. Therefore, for the sake of this paper, the Croatian judicial system shall be considered comprising: “judicial power (courts), autonomous

and independent judicial bodies (state attorneys), executive power (Ministry of Justice), autonomous and independent bodies (State Judiciary Council and State Attorney Council), autonomous and independent service (advocacy), autonomous and independent public service (notaries public) and public institution (judicial academy)". The CJS shall be considered its part related to the judicial power only, i.e. the courts (The European e-Justice Portal, 2017).

## 2.2. On the CJS Nature

By definition, curative function comprehends acting ex-post, reactively, while preventive function assumes acting ex-ante, proactively, "in anticipation of future problems, needs, or changes" (Merriam-Webster). The CJS undoubtedly has a curative function, an ability to mend disputes over social, economic and other relations via their legal aspect, ruling upon one's rights and duties" (the Constitution, Article 29). The CJS has also certain proactive and preventive functions, e.g. via general and special prevention, and as a source of law via interpretation of law. Those functions have been, nevertheless, inevitably mainly achieved by its curative function: solving of already initiated cases. Therefore, this analysis indicates that the nature of CJS has been predominantly curative.

## 2.3. On the CJS Qualities

An analysis of the basic CJS statistics indicates certain tendencies in the 2012-2016 periods.

Year	2012	2013	2014	2015	2016
Old cases	827,102	795,556	735,873	616,686	559,072
New cases	1,658,004	1,593,735	1,341,919	1,252,451	1,297,410
In progress	2,485,106	2,389,291	2,077,792	1,869,137	1,856,482
Solved	1,664,112	1,623,938	1,432,912	1,290,442	1,340,157
Unsolved	795,556	735,873	616,686	559,072	508,931
Judges & Judicial Advisors	2528	2516	2556	2482	2509

*Table 1 Number of the Court Cases and Judicial Personnel  
 (Ministry of Justice of the Republic of Croatia, 2017)*

Yet, such indications have dubious significance and potentially opposite implications. Far from denying potential importance of such data and indicators, they nevertheless tell little about the quality of provided solutions, their impact on the society, and overall effectiveness. E.g. while during the said period there has been a permanent fall in the number of cases which remain unsolved from the previous periods, and persistent tendency to have somewhat more solved cases within a calendar year than the received ones, there is also a strong tendency of drop in the number of the solved cases. Moreover, respective data confirms strong correlation between the inflow level of new court cases and the number of the solved cases. More new cases relate to more solved cases, and vice versa, less new cases relate to less solved cases. We assume that an equal number of court officials should theoretically be able to solve, in each equally long period of time, on average, an equal number of cases. In practice, however, that is not the case. The difference between maximal and minimal number of officials during the analysed period is only 2.90%, while the difference between maximal and minimal number of solved cases during analysed period is 22.45%. That leaves us with only two possible conclusions:

- a) more solved cases result from more new cases, or
- b) more solved cases result from undocumented factors.

Conclusion under b) may be disregarded for any practical need, since we are missing necessary data for further analysis and any final conclusion. Conclusion under a) rises certain doubt in

significance of the presented data, since no report explains the abovementioned phenomenon. Therefore, presented official data have been inconclusive, since they do not necessarily indicate an effective and overall CJS improvement.

#### **2.4. On the CJS Outlooks**

Analysed CJS statistics based on the numerical results promotes form over substance, quantity over quality. Such bureaucratic, quantity preferring model, spreads in practice. E.g. during the 2012-2016 period there were unprecedented contests between judges organized by the court authorities: statistical data on achievements of individual judges were publicly announced, having judges and other court officials being valued and awarded solely upon the quantity, i.e. number of their rulings within a certain period of time etc. ("Najuspješniji suci, službenici i nemještenici u 2015. su..."). Thus, the CJS status, despite some nominally positive statistics, in the whole, might be slowly deteriorating. Such findings confirm the CJS's adhering to so the called "Mediterranean" circle or model, known for its "formalism, inflexibility" (Uzelac, 2014, p. 63). Furthermore, the European Union authorities in their 2017 report for Croatia declare just a "limited progress", such progress being restricted to two CJS sectors only (The Country Report Croatia 2017, p. 2). Rather primitive, populist actions of some of judiciary authorities in the Republic of Croatia, as above, may be related to the findings on perceived independence of the Croatian national justice system among the general public in 2017 (The Flash Eurobarometer 447), which are still negative, but with slightly positive tendencies. Thus, Croatia is currently second from the bottom of the corresponding classification, majority of the respondents having rated CJS as bad (62%). Findings in regard of perceived independence of the Croatian national justice system among companies in 2017 (The Flash Eurobarometer 448) indicate mixed tendencies i.e. rise in both stronger positive and stronger negative marks. Nevertheless, Croatia records absolutely the worst marks within the European Union: the majority of companies rate CJS as bad (67%). In conclusion, despite the years of reforms, the CJS still has many important negative aspects, while facing, with high probability, several general negative tendencies in regard its, predominantly curative, functions. Let us review some possibilities for a different approach.

### **3. ON THE PROACTIVE LAW IN CROATIA AND ITS PERSPECTIVES**

While certain PL elements, as shown below, do exist in the Republic of Croatia, the PL as a concept is locally mostly novel, if not unknown. In October 2017 we failed to locate any PL dedicated paper in Croatian language: related search via Hrčak (The Portal of Scientific Journals in Croatia) returned no findings, while a worldwide internet search for "proactive law" and "preventive law" in Croatian returned one finding, i.e. none, respectively.

#### **3.1. An Introduction to the Proactive Law**

The idea of PL has been well encompassed by the European Economic and Social Committee: "Proactive Law is about enabling and empowering — it is done by, with and for the users of the law, individuals and businesses; the vision here is of a society where people and businesses are aware of their rights and responsibilities, can take advantage of the benefits that the law can confer, know their legal duties so as to avoid problems where possible, and can resolve unavoidable disputes early using the most appropriate methods." (The European Economic and Social Committee, 2009, p. 1). Some consider the "proactive law" as a synonym for the "preventive law" (Barton, 2008, p. 36), some adhere to the term "preventive law" rather than to "proactive law" (Dauer, 2008, p. 15), while some believe that the "proactive law" is a wider term which, besides a preventive aspect, contains also a certain promotive aspect (Haapio, 2006, p. 24). There is a general consent that the first contemporary (if not ever) comprehensive work on this matter was that of Louis M. Brown. Although primarily a set of practical self-help

advices, therein presented principles are still up-to-date, including the very first and basic idea: "It usually costs less to avoid getting into trouble than to pay for getting out of trouble." (Brown, 1970, p.3). The new strong support to ideas of the PL may be found in nowadays Northern Europe, this time embodied as PL. Besides geolinguistical reasons for introductions of the term "proactive law", Haapio deliberates that the "proactive law" is a broader term than the "preventive law: "While the primary target group of the preventive law message is lawyers – lawyers practicing preventive law – the PL message is targeted at both lawyers and clients, and the clients' buy-in is crucial." (Haapio, 2006, p. 24). For the sake of the further PL understanding, may well serve the scheme below (Figure 1).

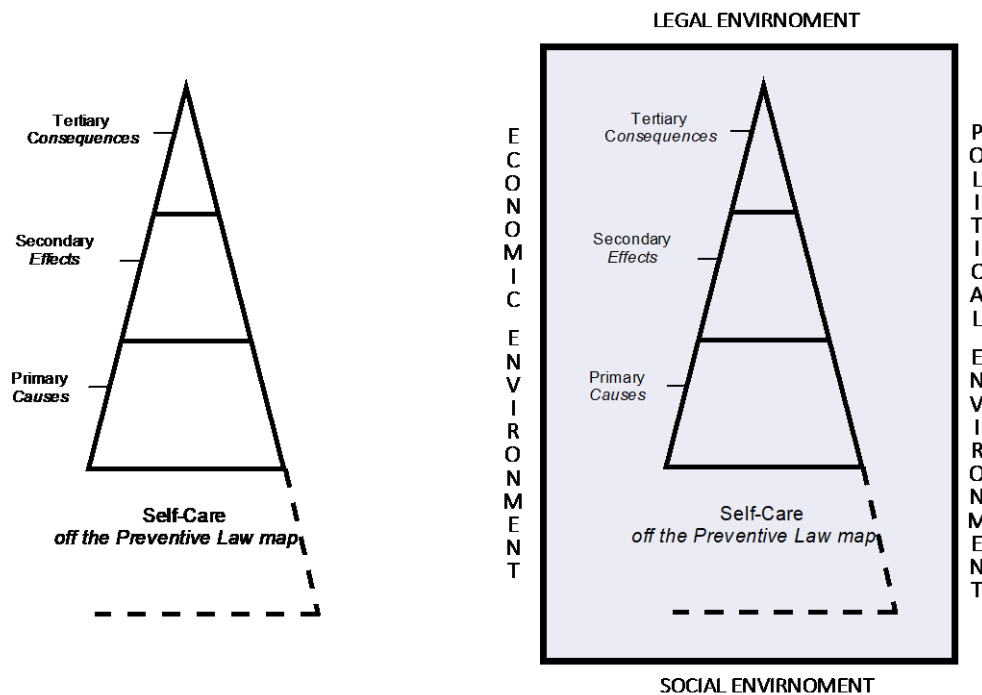


Figure 1: Preventive Law and Proactive Law: Similar Approach – Different Focus (Haapio, 2006, p. 23)

Figure 2: Contextualized Figure 1, Preventive Law and Proactive Law: Similar Approach – Different Focus (Haapio, 2006, p. 23)

Haapio elaborates: "The differences between preventive law and proactive law are illustrated in Figure 1, which is adapted from preventive medicine. The pyramid has three levels: primary (causes), secondary (effects), and tertiary (losses and other harmful consequences). Just like preventive medicine, preventive law and proactive law stress the importance of working at all three levels. So far, preventive law has worked predominantly in the domains of secondary and tertiary prevention. Proactive law, again, has focused on the primary and secondary levels and, in particular, on supporting clients' self-care, which is considered fundamental at all levels." (Haapio, 2006, p. 25).

### 3.2. On Proactive Approach in the Republic of Croatia in General

Our own analysis supports Haapio's dynamic valuation of the PL (Haapio, 2006, p. 26). The work of Louis M. Brown's indeed reflects his time and environment: it has been related to primarily lawyers, since, we believe, lawyers were the best suited to, in the USA, during '40 and '50 of the 20th century, implement preventive measures. The PL approach, as above, derives from the current legal, economic, political and general social environment of the countries with, on average, steadier societies, stronger economies, more efficient legal and

political systems and respective trust of their subjects. In the Republic of Croatia, which belongs to the abovementioned, so called, "Mediterranean" circle, there are no such structures, and there is no such trust in the system and its institutions (see the findings above). The lack of trust may be ascribed to the lack of understanding of realities as well: of one's rights, duties, possibilities etc. Abovementioned reports strongly indicate a perception of the CJS as an instrument dependent of particular interests. Ever more heteronomous legal norms, of which we shall talk about later, as well as notorious sensationalism of public media in regard real or alleged CJS flaws etc., do not help. Without understanding, including understanding of importance of the law and CJS as one of its reflections, as well as benefits of the PL, any attempt of their improvement, or implementation respectively, will inevitably face further lack of understanding. Furthermore, we deem that the lack of understanding would mean less support and stronger opposition to realisation of PL concepts. Thus, in order to promote PL concept in the Republic of Croatia and help to improve the CJS, a process of better understanding of realities and possibilities seems to be a necessity. Such stance would be in accordance with Pohjonen's conclusions: "When law is seen as a continually-developing process of understanding, both the reactive and proactive ability and sensitivity of the system is increased. The system becomes more self-reflexive. Law is thus seen as a responsible actor in a particular social reality, which reflects what kind of reality it furthers." (Pohjonen (2006) p. 63). Therefore, the situation in the Republic of Croatia requires specific solutions, customized to meet the aforesaid environmental conditions and available resources. In order to compensate the aforementioned and other unfavourable conditions, we propose to diversify the idea of prevention and the PL concepts among, and organise focused interdisciplinary networking within, wider circle of addressees, among other, and not necessarily in the following order: the CJS, judges and their associations, attorneys and the Croatian Bar Association, the Croatian government including the Ministry of Justice and other ministries and governmental agencies, law schools and other relevant academic institutions, legislators, public media, local communities and authorities, business community, interested NGOs, general public etc. Such an approach might require some adaptation in the PL methods. Promoters of the PL ideas would not have to deal with the lawyers only, educated and experienced in law, and business clients, often well educated, with strong personal interest, awareness of possibilities and means to realize them. Such approach would require a sentient effort of countless laypersons to, at least, review if not even apply, new, initially only possibly beneficial, ideas and principles – those of the PL. Due to the proposed diversification, the PL promotion and implementation would be a very complex undertaking. Nevertheless, that diversification may prove to be to the greatest benefit – with so many participants, even a small individual contribution may result in considerable outcome in total. Therefore, in accordance with the general request for maximum impact with minimum involvement and besides the abovementioned continuous work on an improvement of personal and mutual understanding, we believe that the first stage of the systematic PL implementation in the Republic of Croatia, and the lasting, project long process, should be definition of the target groups, their common goals and particular interests, deeming their overlapping points the best place to put initial efforts, expecting maximised results due to the higher interest and, consequentially, the increased susceptibility of such addressees, or at least less resistance against the PL ideas.

### **3.3. Proposed Proactive Approach in the Republic of Croatia**

Due to the limitation of this paper to indicate certain problems and propose possible solutions only, we submit below for further subsequent and deeper analysis, several points of proactive actions that may be useful for the CJS, e.g. resulting in lower inflow of the new cases before CJS. Less new cases may leave more resources of the CJS to deal with the remaining cases, lower the pressure for quantitative effect and let the CJS improve its basic curative functions,



thus accomplishing in return better predictability, quicker passing of rulings (but not at the expense of quality), reducing the number of speculative cases, which in return may improve legal safety etc., further promoting positive trends.

### *3.3.1. More Proactive CJS*

The CJS abilities to act on the PL promotion and implementation have been rather restricted. The CJS nature has been proved mainly curative. On the other hand, the Ministry of Justice is the master of its material resources, and jointly with the State Judiciary Council, the master of its human resources, while legislators themselves set most of the rules. Extensive changes in legislature and judicial practice which, among other, relate to the transition to post-socialism, integration to the European Union and tremendous technological advance, disposed with many of locally known and well accepted traditions, values, legal norms and their interpretation. Thus, the CJS has been facing an enormous production of norms, many of which neither CJS nor their primary addressees have been familiar with. Such heteronomous legal norms are poor substitution for the fine fabric of other instruments of social regulation (moral, customs, generally acceptable values etc.). The CJS thus becomes an arbitrator over a whole range of social, and not only legal, relations, competing ever with public media and social networks, neither of which necessarily authentically represents the best interest of the society or certain parts of the same. The CJS, additionally burdened with the abovementioned quantitative valuation, is not in position to respond to such requests. Uzelac nicely quote John Henry Merryman who "pointed to the 'quite different status of the civil law judge' as compared to the 'judicial supremacy' of the judges as 'culture heroes' of the common law tradition. He described the civil law judge as 'a kind of expert clerk', whose task is 'to fit into the formal syllogism of scholastic logic' the whole process of judicial decision-making, as 'an operator' with 'a mechanical function', briefly put as 'a civil servant who performs important but essentially uncreative functions'. A frank, self-critical analysis forces us to conclude that Merryman's over 45-year-old descriptions have not lost their freshness and accuracy, at least when the Judiciary of the European South is concerned." (Uzelac, 2014, p. 63). Thus, in our experience, Croatian judges have been facing that problem with different approaches: some judges review the cases with due thoroughness, often being exposed to the bureaucratic criticism of insufficient "productivity"; some escape to formalism and pure normativism disregarding teleology; some are being guided by the imposed quantitative requests, etc. As a result, some judge well, but slowly, some formally correctly, but vainly, some quickly, but regrettably, etc. Such inconsistency results in, among other, utter unpredictability. Unpredictability opens a way to speculation, uncertainty and further, sometimes well-founded, criticism which in return add more pressure on the CJS and push it in a downward spiral. What the CJS may do itself is to help improving the predictability in regard to court cases. In result, there would be less speculative litigations. More predictable outcome may result in the more responsible approach from both the parties and their legal counsels, less court cases, and more certainty in general for the shattered society in general. Knowing not only the rules, but also the consequences for those who do not respect the rules, is the basis for the personal safety and running of any but speculative business. The CJS has internal mechanisms for exchange of information for the sake of unification of practice. It may also utilise said mechanisms in order to suppress the above already criticised bureaucratic approach of putting the quantity before quality of rulings, take a more consistent stance towards public media etc.

### *3.3.2. More Proactive Other Subjects*

A change in approach towards proactive may result in countless measures. The European Economic and Social Committee provided for many recommendations, in particular for the regulators (The European Economic and Social Committee, 2009, p.p. 26-33). We add few

more examples in regard other subjects, with a thought on local circumstances, minimal resources required and maximal impact for the CJS. State Attorney has statutory option to apply out-of-court solutions. From 2012 up to the end of 2016 total of 6.621 settlements has been reached (Attorney General of the Republic of Croatia, 2016, p. 154). An additional effort should be undertaken to raise the proportion of such outcomes, e.g. by means of change of the criteria for out-of-court settlement etc. The Ministry of Justice may allocate resources to improve the abovementioned CJS information sharing mechanisms, CJS personnel education and judicial administration as support to the CJS main functions. Accepting promotion of the PL as strategic goal may also be helpful. So far, proactive elements are usually being mentioned just as an underdeveloped option (Ministry of Justice of the Republic of Croatia, The Strategic Plan of the Ministry of Justice 2016-2018, 2016, p. 14) State Judiciary Council and State Attorney Council may endeavour to better meet the CJS needs valuating qualities of the candidates, especially in regard specialisation etc. Advocacy has most freedom to act on an individual level. Attorneys, if better educated on the PL may be one of crucial elements of the PL promotion. Nevertheless, either a systematic education would be required, or setting of the PL elements that would require from attorneys to improve their PL related skills. Such scenario would be more plausible if structured in best interest of both clients and attorneys. Changes in the official tariff may be advised in that regard, e.g. stimulatory fees for acting before arbitration or in conciliation or similar may be reintroduced, etc. Finally, importance of the proper information available to all the citizens and business subjects has already been pointed out. Among other, they should be more aware of their possibilities to prevent, or out of the court solve, legal problems. Promotion of understanding of these matters by public media may prove to be rather efficient and cost effective. The CJS has been for years a rather helpless target of unscrupulous media, and may partially explain so negative perception of the CJS, as above. Depriving the CJS of moral authority is anything but good for the Republic of Croatia. Change in such position of the CJS may be achieved in several ways, from further improvement of the CJS itself, up to increased judicial repression against irresponsible media. Unfortunately, as long as irresponsible media has been supported by irresponsible politicians, who are both the creators of regulations the CJS has to follow, and wielders of executive power which control the CJS's resources, it will be hard to get out of this closed circle. Nevertheless, an opened dialog still may be attempted and hopefully found to be interesting for public media – in the end, the PL law is, at least in Croatia, totally new story.

#### **4. CONCLUSION**

The official statistics confirm the CJS reforms and their results as priceworthy. However, presented analyses still indicate certain weaknesses of the CJS, while other statistics indicate problematic CJS's outlooks. Besides the confirmed limits of the CJS's curative function, it appears that some, if not even the most, of such weaknesses may be ascribed to external subjects and factors. Therefore, the problem should be addressed directly: prevented or solved at the source, via involvement of all the interested parties, in accordance with the PL concepts. Thus, among other effects, the inflow of new court cases might be reduced, allowing the CJS resources to be reallocated to existing cases and other tasks. Due to the specifics of the problem, CJS itself and its environment, such undertaking would require efforts of many subjects. While organisationally most demanding, such approach may achieve significant results, among other, atomising the problems, minimizing efforts of individual subjects involved and cumulating the effects. Since this paper was intended to provide primarily general findings on some of the CJS related problems and only the concepts of possible solutions, further analyses have been required in order to provide more specific solutions, following the holistic approach and the general principle: cure if you must, prevent if you can.

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## FINANCIAL LITERACY OF HOTEL MANAGERS IN CROATIA: AN INSIGHT INTO PERSONAL CHARACTERISTICS<sup>1</sup>

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### **ABSTRACT**

*A widespread appearance of insufficient understanding of financial products' key attributes, and generally lack of financial knowledge and literacy, poor consumer protection, deregulation and fierce competition in the financial-services industry were a fruitful ground for origination and distribution of predatory, destructive and usually very complex financial instruments, what altogether led to the global financial crisis. Therefore, one of the focal points towards which policymakers direct public attention nowadays is raising the level of financial literacy of financial consumers as a necessary prerequisite for making more informed financial decisions. Bearing that in mind, with this empirical survey we aim to explore personal factors which might explain disparities in the level of financial literacy, rather than investigating the effects of financial literacy on financial decisions and their successfulness. Furthermore, while personal finance and individuals or households are at the center of the most of studies, we pay attention to corporate finance, to be more precise, hotel managers, since tourism, hospitality and hotel industry are continuously increasing their importance in the Croatian economy. Besides examination of other personal characteristics, an assumption is made that hotel managers' financial literacy is driven by the level of formal education, continuous professional specialization and consulting as well as work experience in comparable job positions. A questionnaire research encompassed 120 hotels (3, 4 and 5 star hotels) in the Split-Dalmatia County. The response rate was approximately 27% i.e. managers from 32 hotels filled out the questionnaire. The most of them had intermediate and higher level of financial literacy, while disparities in the level of financial literacy are explained with a presence or absence of professional specialization and consulting services. Thus, with an overall promotion of financial literacy importance, the concept of lifelong learning and using financial experts' service in the corporate sector need to be emphasized in order to potentially boost the performance of this industry.*

**Keywords:** *corporate finance, financial literacy, hotel managers, personal characteristics, questionnaire*

### **1. INTRODUCTION**

Incompetence and irresponsibility of financial products' consumers in the financial decision making are nowadays among the key explanations of the recent financial crisis onset. Since the true commitment and efforts made by government, policymakers and financial regulators in the direction of a more radical reregulation of the financial-services industry are obviously missing, outsourcing responsibility from those who should serve to ensure public interest towards financial consumers that should become more financially literate and prudent was a reasonable

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way-out from this unfavorable position. In a short while, financial literacy became the latest buzzword in the mass media, with mounting evidence, found in the most recent academic literature, about it as a promising research field for scholars worldwide. Although the necessity of raising the consumers' financial literacy has been justified globally, and the idea of implementing the financial literacy education embraced by policymakers, the consensus on its conceptual and operational definition has not been made (Remund, 2010). Usually, the financial literacy is approximated with financial knowledge, attitudes and beliefs which determine financial behavior and the overall financial well-being (e.g. Vehovec, Rajh, Škreblin Kirbiš, 2015). Furthermore, a substantial body of literature refers to financial literacy only in terms of personal finance, no matter whether the causes (e.g. Nicolini, Cude, Chatterjee, 2013; Vehovec, Rajh, Škreblin Kirbiš, 2015) or consequences (e.g. Sevim, Temizel, Sayilir, 2012; Klapper, Lusardi, Panos, 2013) of financial literacy are investigated. Thus, the challenge for the authors of this paper is to shed light on the financial literacy phenomenon in the corporate finance context. Furthermore, rather than exploring the effects of financial literacy for the business performance likewise Stefanitsis, Fafaliou and Hassid (2013) and Korutaro Nkundabanyanga et al. (2014) did for the SME sector in Greece and Uganda, respectively, we focus on the level and determinants of financial literacy of hotel managers in Croatia since tourism, hospitality and hotel industry have rocketed in Croatia in the last few years. In addition, personal insight of one of the paper's authors into this industry, as well as her professional experience and developed business network helped us to achieve satisfying response rate in a very short time span. The main caveat of our research is that even professional managers might have insufficient financial knowledge about the basic financial concepts, so contrary to those who glorify and promote the consumers' financial literacy education as a mean of the utmost importance for the future crisis prevention, we cast doubt on its beneficial micro and macroeconomic implications, similarly to Willis (2008) who concludes that financial education might increase financial consumers' confidence, without improving their financial skills and abilities what could end with even worse decisions. Altogether a conclusion is made that financial literacy education must not be treated as a substitute, but rather as a complement to improved financial consumer protection and more effective regulatory reform of the financial-services industry. The rest of the paper is organized as follows. Section 2 clarifies the financial literacy notion and reviews studies which are considered to be among the most relevant for the paper topic. Section 3 discloses empirical strategy and discusses research findings. In the last section conclusions are drawn.

## **2. FINANCIAL LITERACY – THE LATEST BUZZWORD**

Despite the omnipresent use of the phrase, the concept of financial literacy became challenging to explain, and consequently measure. Remund (2010, p. 276) summarizes numerous clarifications given by various parties with the financial literacy on agenda, whether they are scholars, policymakers or financial experts and concludes that the notion usually serves to describe "the knowledge, skills, confidence and motivation necessary to effectively manage money". In addition, he proposes a conceptual definition of financial literacy as "a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions" (Remund, 2010, p. 284). Thus, besides financial knowledge and ability to apply it in praxis, good financial behavior and acquired financial experience are indirectly underlined as key constructs of the concept of financial literacy. Similarly, Huston (2010, p. 307) points out that financial knowledge should not be considered as an equivalent to financial literacy, as financial literacy encompasses the application dimension "which implies that an individual must have the ability and confidence to use his/her financial knowledge to make financial

decisions". For instance, Stefanitsis, Fafaliou and Hassid (2013) demonstrated that despite adequate financial knowledge levels of Greek SMEs about some thematic areas, their financial behavior and overall performance were not on satisfactory level. The aforementioned implies that there might be a problem in applying the financial knowledge in business praxis. Hence, financial experience might serve as an intermediating factor when explaining the gap between the financial knowledge and its application in financial decision making. Namely, Caratelli and Ricci (2012) as well as Frijns, Gilbert and Tourani-Rad (2014) provided credible evidence that financial experience has a crucial role in explaining the financial literacy. Moreover, Frijns, Gilbert and Tourani-Rad (2014, p. 128) argued and found evidence for the two-way positive linkage between financial literacy and financial experience as "more financially literate people engage in more financial activity and therefore become more experienced", while "people may also learn from their financial experiences and therefore become more literate". Thus, authors either propose higher adoption of experiential learning approach in financial education (via e.g. stock market games) as a way of increasing the financial experience and consequently financial literacy (Frijns, Gilbert, Tourani-Rad, 2014) or strongly encourage "incentives on the use of financial instruments or wealth accumulation, rather than on educational programs" (Caratelli, Ricci, 2012). In case of insufficient financial knowledge and experience, engaging financial experts is recommended as a desirable solution. However, Collins (2012) proves that using professional financial consulting is associated to higher income, education and financial literacy level of individuals and that financial advisory is a complement, and not the substitute for financial capability. Nevertheless, a sizeable body of literature emphasizes the relevance of financial education for the financial literacy level and financial welfare. Generally, higher educational attainment is acknowledged as a driver of financial literacy (e.g. Al-Tamimi, Bin Kalli, 2009; Caratelli, Ricci, 2012; Sevim, Temizel, Sayilir, 2012; Vehovec, Rajh, Škreblin Kirbiš, 2015), while financial education is considered to be a cure for financial illiteracy and poor financial outcomes. For instance, according to Klapper, Lusardi and Panos' (2013) findings for Russia, higher financial literacy of consumers increases their participation in financial markets, decreases the use of informal sources of borrowing and makes them less vulnerable to macroeconomic shocks. Sevim, Temizel and Sayilir (2012) confirmed that Turkish financial consumers with a higher level of financial literacy do not exhibit excessive borrowing behavior and demonstrate more informed credit use behavior. Similarly, financially illiterate Croatian financial consumers enter into higher indebtedness than financially literate ones (Bahovec, Barbić, Palić, 2015), while those with a higher level of financial education have more responsible saving behavior (Cvrlje, Bahovec, Palić, 2015). Usually, besides education level, other socio-demographic characteristics, gender, age, the income level, to mention few also explain disparities in the level of consumers' financial literacy. Cross-country studies (e.g. Nicolini, Cude, Chatterjee, 2013) even point out the relevance of national and cultural differences for the financial literacy. Therefore, single country investigations on this matter are always welcomed. The literature (mostly empirical) background on the business financial literacy is rather scarce, but usually consistent in conclusions that financial literacy might be a challenge even for entrepreneurs (Stefanitsis, Fafaliou, Hassid, 2013), investors (Al-Tamimi, Bin Kalli, 2009), managers (Marriott, Mellett, 1996), and audit committee members (Giacomino, Akers, Wall, 2009). As some empirical investigations mainly about the determinants of financial literacy of Croatian financial consumers had been made (e.g. Bahovec, Barbić, Palić, 2015; Cvrlje, Bahovec, Palić, 2015; Vehovec, Rajh, Škreblin Kirbiš, 2015) we directed our attention towards the financial literacy of professional managers as improving their financial literacy might be even more important than improving the consumers' financial literacy. The arguments for focusing on the Croatian hotel managers were elaborated in the introductory part. To sum up, based on the reviewed body of literature the H-1 hypothesis is established: H-1: Hotel managers' financial literacy is positively driven by the level of formal

education, continuous professional specialization and consulting as well as work experience in comparable job positions.

### **3. FINANCIAL LITERACY OF THE CROATIAN HOTEL MANAGERS: EMPIRICAL STRATEGY AND RESULTS**

#### **3.1. Research design**

In order to collect the data and examine the state of financial literacy of hotel managers in Croatia as well as its drivers a questionnaire was designed and distributed via e-mail or personally handed in to managers of 3, 4 and 5 star hotels in the Split-Dalmatia County i.e. to 120 hotels. In the time span of almost two months (from November till the end of December of the year 2015) questionnaire was filled out by hotel managers of 32 hotels i.e. the response rate was approximately 27%. Although the county-based approach is acknowledged as a research limitation, we assumed that the adoption of geographical diversification criterion into the empirical strategy would not change significantly the research findings as cultural or differences in economic development among different Croatian counties are perceived to be irrelevant for this research which encompasses practitioners from only one industry. Moreover, certain evidence on socio-demographic features being more relevant than region of residence for explaining disparities in financial literacy of Croatian citizens was demonstrated by Vehovec, Rajh and Škreblić Kirbiš (2015). Whatever the case might be, a focus on solely one Croatian county is justified with practical reason i.e. expected higher data collectability if questionnaire was personally handed in to hotel managers. The level of financial literacy was measured by applying the scoring method on the collected answers on questions related to: 1) financial knowledge, as well as 2) attitudes, beliefs and behavior of hotel managers in financial decision making. Financial knowledge is examined with two questions, out of which one is related to compound interest, and the other one to inflation. Those questions are set in order to detect respondents' understanding and knowledge about the basic financial notions/concepts and are frequently found in the empirical background on financial literacy. The question about compound interest is established in the following way: "If you have 100 HRK in your savings account, and the annual interest rate is 2%, after 5 years you will have exactly 102 HRK in your account?". The question about inflation is as follows: "If the annual interest rate on your savings account is 1%, and the annual inflation is 2%, after one year you will be able to buy the same amount of value with the money in this account?". Respondents could agree or disagree with both statements/questions or answer that they don't know the answer. For each correct answer respondents scored 2 points or otherwise they scored -1 point for incorrect or 1 point for unspecified ("I don't know / I am not sure") answer. After summing up scores for the questions about financial knowledge the minimum theoretical score of index is -2, while the maximum index value is 4, what corresponds to a poor level of financial knowledge or high level of financial knowledge, respectively. Attitudes, beliefs and behavior of hotel managers in financial decision making were also investigated with two questions. "Do you look for professional advising service in strategic decision making with regards to corporate finance and hotel management?" was a yes/no question about hotel managers attitudes and beliefs, where those respondents who use professional advising service scored 1 point, and 0 point otherwise. Further, if in the last two years hotel managers attended seminar or workshop in the field of finance and tourism at least once they scored 1 point, for more than once they scored 2 points, and 0 point for not attending any kind of professional specialization in those fields in the observed time span. We acknowledge that the idea for the aforementioned questions came from the work by Stefanitsis, Fafaliou and Hassid (2013). Altogether, the sum of scores for the both set of questions i.e. financial knowledge and attitudes, beliefs and behavior in financial decision making ranges from the minimum of -2 to the maximum of 7 points. Adopting the scoring methodology when measuring financial literacy was lately found e.g. in the work by Vehovec,



Rajh and Škreblin Kirbiš (2015). Besides aforementioned our questionnaire encompassed many other questions related to financial behavior of hotel managers as well as its expected outcomes i.e. hotels' financial performance. Nevertheless, both theoretical and empirical insight into consequences of certain level of financial literacy of Croatian hotel managers, are beyond the scope of this paper and will be a subject of a subsequent article. In addition, details regarding the questions about general/personal characteristics of hotel managers are indirectly noticeable from the research results. Namely, due to a paper size restriction the questionnaire is not appended to paper, but is available upon request. All calculations and figures were made in statistical package SPSS Statistics.

### 3.2. Data sample characteristics

The most of 32 survey respondents were hotel managers in 4 star hotels (18 respondents or 56,3%), and 3 star hotels (11 respondents or 34,4%). Although only 3 respondents (9,4%) were hotel managers in 5 star hotels, they represented the whole population of 5 star hotels in the Split-Dalmatia County at that point of time. In addition, 68,8% of respondents (22 hotel managers) were females. Around 81% of survey respondents were between 18 and 39 years old, 5 hotel managers were older than 40 any younger than 50, and only 1 hotel manager was between 50 and 59 years old. Only 3 hotel managers had secondary school education (9,4%), 4 respondents accomplished postgraduate master study title (12,5%), while the rest (78,2%) had undergraduate or graduate university education. In addition, the most of hotel managers completed their formal education in the various fields of economics (25 survey respondents) out of which only 3 hotel managers accomplished their degrees in the field of management, and 1 of them in the field of tourism, while 5 hotel managers finished their education precisely on faculties of tourism and/or hospitality management (table 1).

*Table 1: The level and field of hotel managers' formal education (Authors' calculation)*

	Economics (Tourism)	Tourism	Economics/ Business Studies	Business Studies (Management )	Humanities and Social Sciences	Law	Total
Secondary school	-	2	-	-	-	1	3
University undergraduate study level	-	3	7	-	-	-	10
University graduate study level	1	-	13	1	-	-	15
Postgraduate master study	-	-	1	2	1	-	4
Total	1	5	21	3	1	1	32

The most of hotel managers had been working in the hotel industry or comparable job positions (table 2) from 5 to 10 years (16 survey respondents) or only up to 5 years (11 respondents). Those who had work experience in the observed industry for more than 10 years were in minority (5 respondents).

Table 2: Hotel managers' work experience in hotel industry or comparable job positions  
 (Authors' calculation)

Years	Frequency	Percent	Cumulative Percent
up to 5 years	11	34,4	34,4
5 – 10 years	16	50,0	84,4
11 – 15 years	2	6,3	90,6
more than 15 years	3	9,4	100,0

Finally, the most of hotel managers (27 respondents) esteem their knowledge in the field of economics, finance and hotel management as "good" and "very good" one (chart 1). It does not surprise that none of hotel managers perceives his/her knowledge in the aforementioned field as "unsatisfactory".

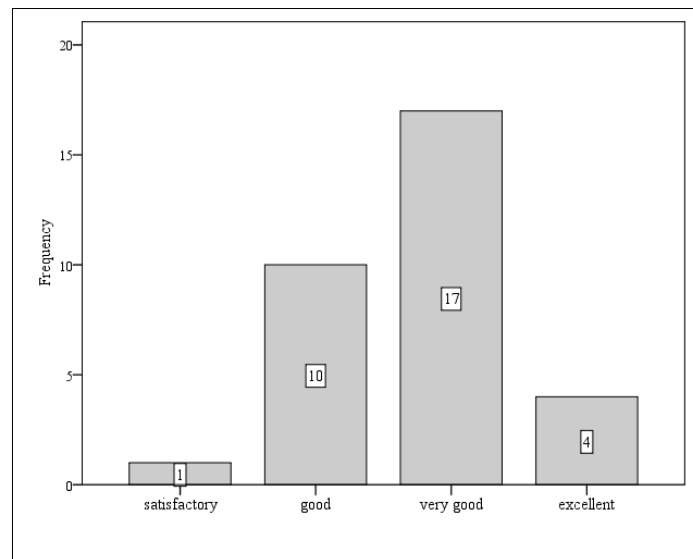
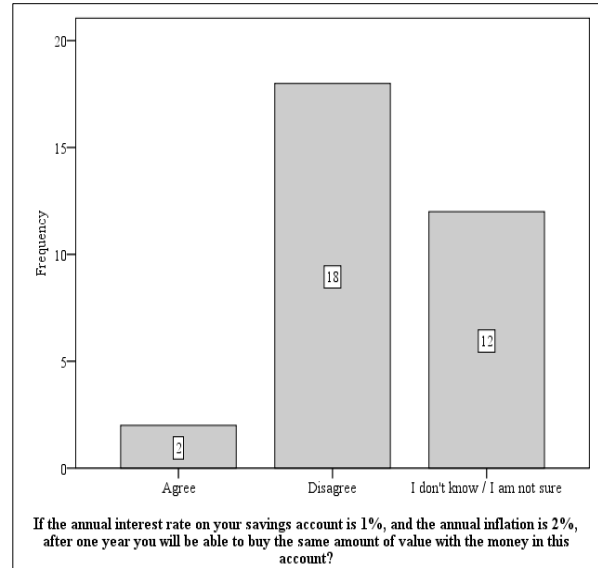
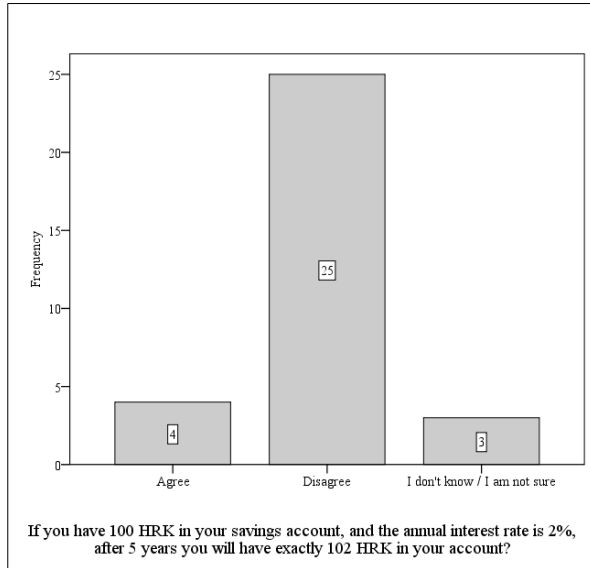


Chart 1: Self-evaluated level of knowledge of hotel managers in the field of economics, finance and hotel management (Authors' calculation)

### 3.3. Descriptive statistics and research findings – content, level and determinants of financial literacy

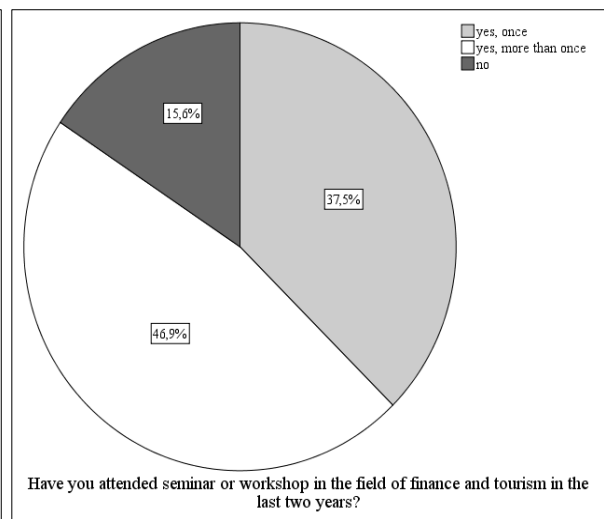
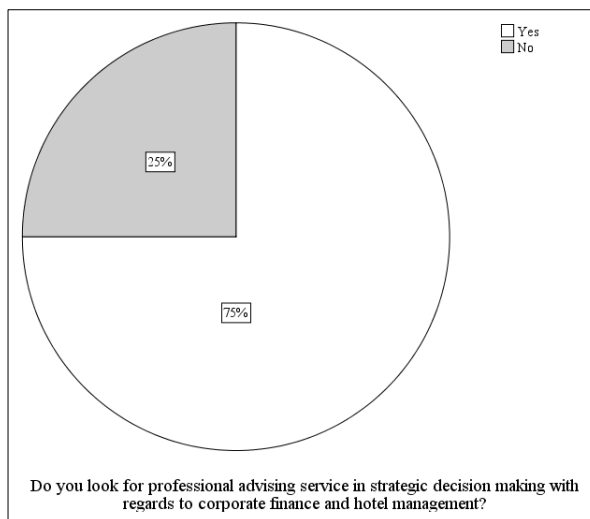
#### 3.3.1. Financial literacy content

As previously described hotel managers' financial knowledge was evaluated throughout questions about compound interest and inflation. Out of 32 survey respondents, 25 disagreed (78,1%) with the statement "If you have 100 HRK in your savings account, and the annual interest rate is 2%, after 5 years you will have exactly 102 HRK in your account?" and thus answered correctly, while 7 hotel managers (21,9%) answered wrong, didn't know the answer or were not sure about it (chart 2). When compared to results on compound interest, financial knowledge about inflation was worse. Namely, 18 hotel managers (56,3%) answered correctly on the statement "If the annual interest rate on your savings account is 1%, and the annual inflation is 2%, after one year you will be able to buy the same amount of value with the money in this account?", while 14 of them (43,8%) didn't know the answer, were not sure about it or answered wrong (chart 3).



*Charts 2 and 3: Hotel managers' financial knowledge on compound interest and inflation (Authors' calculation)*

Furthermore, the question “Do you look for professional advising service in strategic decision making with regards to corporate finance and hotel management?” served to get an insight into attitudes and beliefs of hotel managers in financial decision making. Out of 32 hotel managers, 3/4 (24 survey respondents) answered that they look for professional advising service in strategic decision making in the area of corporate finance and hotel management (chart 3), what implies their positive attitudes towards continuous education in the field, and generally absence of overconfidence.

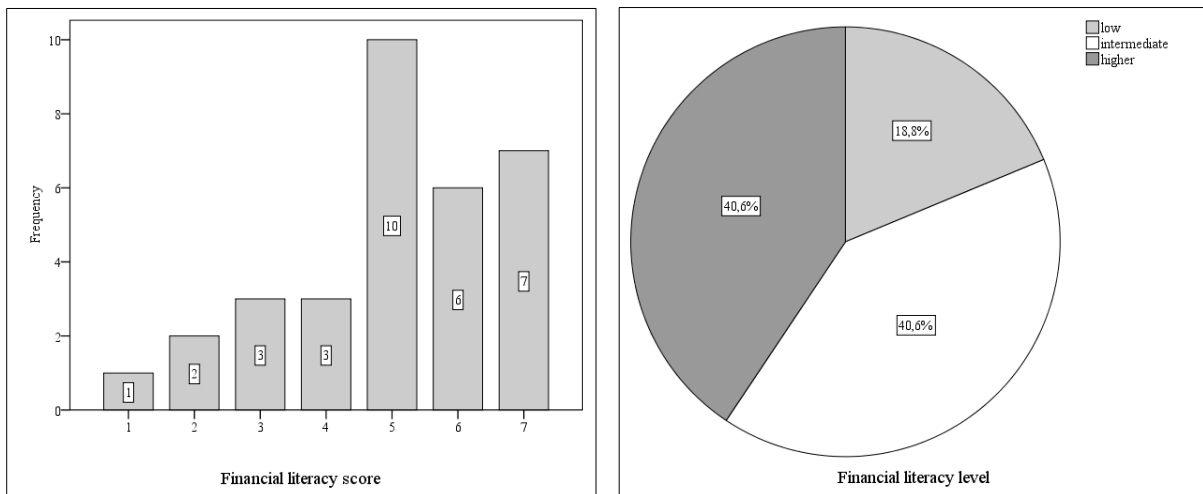


*Charts 3 and 4: Hotel managers' financial attitudes, beliefs and behavior (Authors' calculation)*

These findings are consistent with their behavior (chart 4) as only 5 respondents did not have any kind of professional specialization in the field of finance and tourism in the last two years, while 12 respondents (37,5%) attended one seminar or workshop in this area in the observed time span. Finally, the majority represented with 15 respondents (46,9%) attended several seminars or workshops in the field of finance and tourism in the last two years.

### 3.3.2. Financial literacy level

After applying the scoring methodology on hotel managers' answers on those four questions regarding financial knowledge, attitudes/beliefs and behavior, we calculated the overall financial literacy score with theoretical values ranging from -2 to 7 points. The descriptive statistics reveals that the empirical minimum of financial literacy score was 1 point, while the empirical maximum corresponds to the theoretical one, that of 7 points (chart 5). Thus, all hotel managers had the positive financial literacy score, and some of them, to be more precise, 7 survey respondents (21,9%) recorded the maximum financial literacy score. The mean value of financial literacy score was 5,03 points. In addition, we derived levels of financial literacy from the financial literacy scores in the following way: 1) the low level of financial literacy when empirical financial literacy score ranged from -2 to 3 points, 2) the intermediate level of financial literacy when empirical financial literacy score was 4 or 5 points, and 3) the higher level of financial literacy for survey respondents who scored 6 or 7 points. According to the chart 6 the most of hotel managers recorded intermediate or higher level of financial literacy (81,2%), while only 6 of them had low level of financial literacy (18,8%). Luckily, all of those hotel managers with the low level of financial literacy are open for upgrading their knowledge in the area of finance in order to enhance business performance, while among all hotel managers, only 4 of them with the intermediate level of financial literacy are not eager to get additional financial education. Among them, only 1 respondent did not have any kind of professional specialization in the field of finance and tourism in the last two years, while 3 respondents attended one seminar or workshop in this area in the observed time span. Obviously, those who attended seminar or workshop perceive that it did not add any additional value to them. Interestingly, they self-esteemed their level of knowledge in the field of economics, finance and hotel management as "good" (3 survey respondents) or "excellent" (1 survey respondent).



*Charts 5 and 6: Distribution of hotel managers' financial literacy scores and financial literacy level (Authors' calculation)*

In addition, table 3 discloses that certain hotel managers with the higher financial literacy level tend to underestimate their knowledge, contrary to the most of those with the low financial literacy level that are overconfident about their knowledge. The aforementioned is one the most common behavioral finance phenomenon/conclusions according to which learning and education decrease overconfidence (Brajković, Radman Peša, 2015).

Table 3: Hotel managers' financial literacy level and self-evaluated level of knowledge in the field of economics, finance and hotel management (Authors' calculation)

Financial literacy level	Self-evaluated level of knowledge in the field of economics, finance and hotel management				Total
	Satisfactory	Good	Very good	Excellent	
Low	0	1	4	1	6
Intermediate	0	5	5	3	13
Higher	1	4	8	0	13
Total	1	10	17	4	32

### 3.3.3. Determinants of financial literacy

Personal characteristics, gender, age, level of formal education, continuous professional specialization and consulting as well as work experience in comparable job positions were put into relation with the financial literacy score and the financial literacy level in order to make a conclusion about the drivers of financial literacy. When the financial literacy score was a dependent variable one-way ANOVA was employed, while in the case of financial literacy level non-parametric tests (Mann-Whitney U and Kruskal-Wallis) were performed. Gender and age do not explain disparities in the both, financial literacy score and level, which means that the difference in financial literacy score and level between males and females as well as different age ranges is not statistically significant. The same holds for the level of formal education as the results for the financial literacy score are  $F=0,231$ ;  $sig.=0,874$  and for the financial literacy level  $Chi-square=0,600$ ;  $sig.=0,897$ . The empirical results also confirm irrelevance of the work experience in a comparable job position for the financial literacy score ( $F=1,029$ ;  $sig.=0,395$ ), and its derivation – financial literacy level ( $Chi-square=3,508$ ;  $sig.=0,320$ ). However, those who look for professional advising service in strategic decision making in the area of corporate finance and hotel management have the mean value of financial literacy score 5,38 points, while those who do not use professional advising service have lower level of financial literacy (4,00 points). The empirical significance of the test is  $\alpha^*=0,037$  ( $F=4,751$ ). When testing the financial literacy level with the grouping variable “using professional advising service”, empirical significance of the Mann-Whitney U test is  $\alpha^*=0,041$ . Thus, a conclusion that continuous professional consulting increases the financial literacy score and level is made. In addition, hotel managers who did not have any kind of professional specialization in the field of finance and tourism in the last two years recorded the lowest financial literacy score (3,20 points) in comparison to those who attended one seminar or workshop in this area in the observed time span (4,83 points), and particularly those who attended several seminars or workshops (5,80 points). As assumed the difference between financial literacy scores according to “continuous professional specialization” variable is statistically significant ( $F=6,656$ ;  $sig.=0,004$ ). The same is confirmed for the financial literacy level when “continuous professional specialization” is grouping variable, as the Kruskal-Wallis test is statistically significant ( $\alpha^*=0,029$ ). Thus, continuous professional specialization adds to financial literacy of hotel managers. However, it should be noticed that conclusions on the financial literacy being driven by continuous professional specialization and consulting might be somewhat biased as financial literacy is approximated with financial knowledge, attitudes, beliefs and behavior, where questions on continuous professional specialization and consulting served to evaluate attitudes, beliefs and behavior.

## 4. CONCLUSION

This paper draws attention to insufficiently explored area of business financial literacy. Research findings reveal that there might be a problem in comprehension of some basic financial concepts even among professional managers in the Croatian hotel industry. With

regards to financial literacy drivers, their formal education and work experience in comparable job positions turn out to be subordinated to continuous professional specialization and consulting, what implies the relevance of lifelong learning as well as using financial advisory service. Nevertheless, due to a small size sample and single industry focus we strongly encourage a replication of our study on a larger number of survey respondents among various industries in Croatia, in order to perform more sophisticated statistical analysis and obtain more convincing results. At last, the effects of managers' financial literacy on hotels' financial outcomes will be a subject of a subsequent article.

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## TAX RULINGS AND EU STATE AID LAW: LESSONS FOR CROATIA\*

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### **ABSTRACT**

*Tax rulings and advance pricing agreements (APAs) are perceived by policymakers around the globe as important instruments for enhancing taxpayers' legal certainty. Croatian tax law saw the introduction of these schemes only fairly recently. Namely, advance tax rulings have been introduced in 2015, but hitherto there is limited practical experience with its usage. On the other hand, other EU member states which had rich experience with tax rulings and APAs are currently faced with new legal developments. Most importantly, administrative tax practices in a number of countries have been put under scrutiny from the perspective of EU state aid law. Against this background, aim of the present paper is to derive some lessons for Croatian policymakers and taxpayers when it comes to the usage of advance tax rulings and APAs in the future.*

**Keywords:** *tax law, tax rulings, advance pricing agreements, state aid law*

### **1. INTRODUCTION**

Tax certainty is an important topic on a global level for at least twofold reasons: first, because of the negative impact of tax uncertainty on the economic growth (Gale, Samwick 2014; Zangari et al. 2017) and second, because of the presumed positive correlation between tax uncertainty and tax avoidance schemes, linked with the complex legislative framework for taxation. Unfortunately, Croatian experience with the problem of tax uncertainty is well-documented. Deloitte's 2015 survey, conducted among tax professionals operating in 28 European countries, shows that only France and Italy fare worse than Croatia in terms of tax uncertainty (Deloitte, 2015). Furthermore, one recent survey conducted among certified tax advisors found that they recognise two biggest issues with the relationship between tax authorities and taxpayers in Croatia: (i) lack of legal certainty and (ii) tax authorities' prejudicial view of the taxpayers as tax evaders (Rogić Lugarić, 2016, p. 230). While there are many causes of legal uncertainty in the substantive sphere of Croatian tax system – e.g. frequent changes, complexity and even retrospective application of tax legislation – it is beyond doubt that the legal framework for tax procedure and tax administration did little to alleviate the problem. For example, a recent study issued by one business representative association pointed out that the excessive length of tax dispute procedures adds to legal uncertainty; other vexing problems are related to the unwillingness of the tax authorities to co-operate with taxpayers, as well as the practice of non-uniform application of tax laws by different organizational units within Croatian Tax Administration (Stojić et al., 2016, pp. 38-41). From a comparative perspective, new challenges for tax systems related to technological, economic and political developments led to the creation of new instruments dealing with complex tax issues. The difficulties related to the application and interpretation of tax law are especially noticeable in cross-border situations where taxpayers encounter the difficulties related to the compliance with more foreign tax

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systems. In this respect, important instruments for reducing tax uncertainty are advance tax rulings and advance pricing arrangements (APAs).

## 2. ADVANCE TAX RULINGS AND ADVANCE PRICING AGREEMENTS IN MODERN TAX SYSTEMS

Advance tax ruling can be defined as a statement of the revenue authority's interpretation and application of tax laws to an arrangement, which is binding on the revenue authority in terms of the future application of the tax laws (James, 1999, pp. 731-747). An increasing number of countries have introduced or formalized their rulings systems. The United States presents one of the most developed tax rulings system in the world with a wide variety of legal instruments of guidance to taxpayers (Romano, 2002). Policy reason underlying US rulings scheme is linked with the complexity and technicality of tax legislation, with the role of rulings as a tool alleviating these problems (Givati, 2009). Another well-structured and developed rulings system is found in the Netherlands. The Dutch rulings scheme is aimed at providing certainty to taxpayers, mainly foreign, investing in the Netherlands. Accordingly, advance rulings became an instrument for attracting foreign investment in the Netherlands (Romano, 2002). Other reasons for the introduction of advance rulings are related to the increased need for the simplification of tax system, since such schemes are sometimes seen as a vehicle for establishing some new forms of active taxpayers participation. The first forms of rulings introduced in Italy were limited to anti avoidance legislation. France developed the so-called protective tax rulings system, understood primarily as a new vision of legal norms and need for evolutionary relationship between tax taxpayers and tax authorities. Such rulings present norms aimed at improving relations between tax authorities and taxpayers with an overarching aim of promoting legal certainty. The rulings systems are emphasized as a standards that are recognized particularly in international law, that encourages states to develop mechanisms for better adaptation of taxpayers to tax coercion. Accordingly, tax rulings are linked with the "culture of negotiation", which is being developed in France through the system of *rescrit* and is one of the components of the "new fiscal management" (Rogić-Lugarić, Bogovac, 2012). It is necessary to distinguish advance tax rulings from other forms of guidance provided by the tax administration to taxpayers in order to help them fulfil their tax obligations (Arbutina, 2009). There are some basic common features found in every ruling scheme: binding nature, formality, treatment of costs etc. Differences in advance rulings regimes are consequence of historical practice and the result of sovereign choices exercised in different states (Sawyer, 2004). Ideally, efforts could be made for development of uniform rulings schemes applicable across national borders. For example, different domestic rules governing advance tax rulings systems in EU Member States (hereinafter: MS) constitute an obstacle to the cross border investments and jeopardise the EU internal market. Accordingly, there have been proposals in the literature for the harmonization of advance tax rulings at the EU level. Romano (2002) proposed a two-tier rulings procedure, in which a national competent authority would be the body of first instance and a central EU authority would be second instance body. Such a central body could function as an supervisor with respect to rulings policy, collection of certain types of rulings requests and as a distribution centre of these requests amongst the competent offices (Žunić Kovačević, 2013). There are certainly some advantages of potential harmonization of advance tax rulings systems on the EU level (Romano, 2002): (1) obtaining a higher degree of certainty in the interpretation and application of tax law provisions; (2) greater consistency and uniformity in the application and interpretation of the law; (3) enhancing the transparency of the decision-making process of the tax authorities in such a way as to improve the perception of the fairness of the tax obligations by taxpayers and thus tax compliance; (4) fostering compliance with tax law and administrative practice; (5) improving the functioning of the self-assessment and self-reporting systems and reducing tax litigation. It is also useful to have in

mind that a similar harmonized system with regard to administrative practices in different MS is found in the field of customs law.

### **2.1. Advance pricing agreements (APAs)**

According to the OECD (2017, p. 214), an advance pricing arrangement (APA) is “an arrangement that determines, in advance of controlled transactions, an appropriate set of criteria (e.g. method, comparables and appropriate adjustments thereto, critical assumptions as to future events) for the determination of the transfer pricing for those transactions over a fixed period of time.” The arrangement usually covers a certain number of years upon its adoption. In essence, APA is a mechanism aimed at preventing future disputes between tax authorities and taxpayers in the specific field of transfer pricing, which is extremely important for multinational companies (MNCs). While APAs may, to some extent be considered as a sub-type of advance tax ruling, there are some important differences. Most importantly, APAs normally entail very detailed analysis of pertinent factual issues, whereas traditional tax rulings tend to be limited to addressing legal questions based on facts presented by a taxpayer (OECD, 2017, p. 216). There are other key differences between APAs and advance tax rulings (Romano, 2002, p. 486). While APAs may be bilateral or even multilateral, advance tax rulings are unilateral and generally do not cover foreign jurisdictions. Advance rulings and APAs also differ in their legal nature since APAs are regarded as agreements whereas advance rulings are considered as one-sided statements of the tax administrations. APA may not be implemented without the approval of the taxpayer, whereas advance rulings are valid without considering the consent of the taxpayer as applicant. The participation of the taxpayer in an advance rulings procedure is limited only to the initial level of the process.

As a consequence of different legal natures, APAs should be differed from advance rulings on the basis of their effect since APAs are binding for the tax authorities, sometimes for taxpayers whereas advance rulings may have binding effects on tax authorities and almost never for taxpayers. Irrespective of the differences between advance rulings and APAs, there is a significant degree of similarity that justifies their joint consideration (Sawyer, 2004). A growing number of states has introduced provisions on APAs in their tax systems, mainly in accordance with OECD's suggestions. For example, in the United Kingdom (UK) a taxpayer may propose a methodology for transfer pricing and supply documentation that confirms or shows that the result of such treatment is fair and neutral. If the tax authorities accept the proposed methodology (proposed by the taxpayer), after checking all the “accompanying” documents and materials, the parties conclude an APA. UK tax law also allows for bilateral and multilateral APAs, which entail participation of tax authorities of other states (Sawyer, 2004). UK rules give taxpayers a choice, before applying for an APA, to opt for some kind of discussion or meeting “pre-filing conference”. This may help taxpayers in assessing whether an agreement is appropriate vehicle for resolving pertinent tax issues. The same pre-filing stage as part of APA is known in US procedure (Boidman, 1992). The Italian tax authorities published in 2010 the first report on the successful adoption of APAs. These practices refer to the period of the first five years after the entry into force of APA rules. The report reveals that during a specified five-year period, 52 requests were submitted and 19 agreements were concluded. The average time needed for the procedure was 20 months (Žunić Kovačević, 2010). The above mentioned bilateral and multilateral APAs, where two or more countries are involved, are more efficient in providing legal certainty. In the cases of a bilateral or multilateral advance pricing agreement there is always a second agreement that is concluded between the competent authorities of countries which are affected by the covered transaction, based on the mutual agreement provision of tax treaties.

### **3. CROATIAN LEGISLATIVE FRAMEWORK**

#### **3.1. Advance rulings**

Croatian academic literature considers advance tax rulings as an affirmation and implementation of the tax procedural principle of good faith. The principle of good faith and fair dealing was for the first time introduced in Croatian tax law by the General Tax Act (hereinafter: GTA) of 2001, but did not contain provisions which would define the content of notion or criteria to apply rulings or APA's. The enactment of the new GTA in 2008 indicated that certain alterations would be made with the aim to more precisely and more clearly regulate the principle of good faith, but legislator again failed to recognize the role of tax rulings. It was only in 2015, by way of amendments to the GTA, when advance rulings became part of Croatian tax system, apparently under the influence of developments of EU framework on information exchange (Žunić Kovačević, 2016, p. 282). According to Art. 10 GTA, tax authorities may issue an advance ruling upon the explicit request of the taxpayer with regard to a limited number of tax-related issues. Namely, the objective scope of the rulings is limited to the following: (i) apportionment of the input VAT; (ii) application of tax laws related to investment projects carried on in Croatia and value of which exceeds EUR 2.66 million; (iii) assessment of the corporate tax base related to corporate restructurings; (iv) application of tax treaty provisions; and (v) tax treatment of business activities which are deemed "unusual". Further elucidation on the advance ruling scheme, particularly as to procedural aspects, is provided in the relevant by-law. It is certainly too early to assess the efficiency of Croatian advance rulings system. On the one hand, it certainly represents a step forward with regard to modernization of tax procedure law. On the other hand, doubts remain regarding limited objective scope of the scheme. Namely, until late 2016 tax authorities have dismissed over 50 ruling requests for rulings on the grounds of their inadmissibility under pertinent law.

#### **3.2. APAs**

Turning our attention to APAs, it first has to be noted that the arm's length standard (ALS) was first introduced in Croatian domestic law in 2004.<sup>1</sup> Over the last decade or so, tax authorities have gained more specialized expertise in transfer pricing enforcement, both in tax treaty context and in circumstances where only relevant domestic provisions apply. Consequently, the focus on transfer pricing has intensified in recent years. This may be evidenced by a marked increase in the number of tax audits specifically related to transfer pricing (PwC, 2016, p. 61). While in the past, the tax authorities tended to focus on intra-group services – sometimes even without necessary substantiation – in recent years a higher degree of sophistication pervades transfer pricing audits. It is important to note how domestic transfer pricing legislation has been clearly developed under the influence of international standards, embodied primarily in Art. 9 OECD Model Convention and in OECD's Transfer Pricing Guidelines. Even if direct reference to OECD Guidelines is not found anywhere in domestic law, Croatian tax authorities heavily rely on its recommendations in transfer pricing enforcement. Unfortunately, official guidance on the proper application of transfer pricing rules is extremely limited. In contrast to the practice of many other countries, Croatian tax authorities have hitherto not issued a comprehensive, publicly available soft-law instrument comprising more detailed explanations and practical examples. Moreover, domestic case law on application of transfer pricing rules is still rather scarce and did not involve sophisticated substantive issues, e.g. intangibles, intra-group allocation of risk etc. However, Croatian tax authorities have on two separate occasions – first in 2009, then in 2014 – commissioned the printing of a special "Manual on transfer pricing audit", i.e. with the aim to serve as a general guidebook for tax inspectors engaged in transfer pricing enforcement. The latest edition of this internal manual is generally based on the OECD

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<sup>1</sup> Current version of Art. 13 Profit Tax Act, codifying the ALS, is for the most part identical to the original one, adopted in 2004.

Guidelines and it even includes an unofficial translation of the Guidelines in Croatian (Tucaković et al., 2014). While the 2016 amendments to the Profit Tax Act (hereinafter: PTA)<sup>2</sup> introduced the concept of APAs, full usage of this instrument was not possible until the amendments were made to the relevant by-law in 2017.<sup>3</sup> APA is defined in first paragraph of 14a PTA as an arrangement between the taxpayer and Ministry of Finance, Tax Administration, and tax bodies from other countries in which associated parties are residents or perform business activities through a business unit, through which, for transactions between associated parties, before their commencement, an appropriate set of criteria is determined, such as methods, comparative criteria, appropriate harmonisation, or key suppositions related to future events, in order to determine transfer pricing for these transactions during a given time period. It is prescribed as obligatory for the taxpayer and for the tax authorities for the time in which it is concluded. Costs for concluding the APA are borne entirely by the taxpayer. The APA procedure starts with a request of the taxpayer and it ends with an agreement between the taxpayer and the tax authority. Such an agreement is binding for the tax period in which the agreement has been entered and for the four subsequent periods, unless changes occur in the relevant factual or legal circumstances. The issues regarding detailed procedure for the conclusion of an APA, its contents, validity deadlines and costs of concluding APAs are prescribed by the Minister of Finance in a special by-law.

#### 4. EU STATE AID LAW ASPECTS OF TAX RULINGS

While the usage of tax rulings and APAs is not without its drawbacks from a tax policy perspective (amplius supra), the designers of EU member states' tax systems have to be particularly wary of the potential conflict between these instruments and EU state aid law. Namely, recent years, beginning with 2013, witnessed an unprecedented wave of investigations into the legality of EU member states' (hereinafter: MS) tax ruling practices, from the state aid law perspective. The investigations were carried out by the European Commission (EC) as a body competent for state aid enforcement within the EU. According to the information provided by high-level EC officials, more than 1000 tax rulings issued by the tax authorities in a number of MS were put under scrutiny (Fort, 2017, p. 381). While the investigations in some cases are still on-going, EC has already issued several so-called negative decisions, i.e. decisions declaring the pertinent measure as incompatible with the EU internal market, which entail the obligation of a MS in question to fully recover the aid from its beneficiary (Luja, 2003, p. 96-97). These EC decisions have made global headlines, since the beneficiaries of the aid declared illegal included some of the biggest multinational companies in the world, like *Amazon*, *Apple*, *McDonalds* and *Starbucks*. Moreover, the amount of recovery provided by the EC in its decision regarding *Apple* reaches a quite staggering number of 16 billion EUR, which the Republic of Ireland is supposed to recuperate from the US-based tech giant. Important legal caveat applying in this and other similar cases (e.g. *Fiat*, *Starbucks*) is that the legality of EC decisions will be tested before the European Court of Justice (ECJ), since interested parties have brought an action for the annulment of respective decisions (Fort, 2017, p. 381). It is important to underline that EC investigations in "tax rulings cases" have become much more extensive after the so-called *LuxLeaks* affair broke out, bringing attention to the wider public of blatant tax avoidance schemes utilized by large MNCs and sanctioned by tax authorities of some EU MS (Wattel, 2016, p. 791). Accordingly, this new activism of the EC may be linked with other important developments on the EU and global level aimed at curbing international tax avoidance, such as the OECD/G20 project against "base erosion and profit shifting (BEPS)", launched in 2013, or the adoption of a new EU directive against tax avoidance in 2016 (Fort, 2017, p. 370).

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<sup>2</sup> Profit tax Act, Official Gazette, nos. 177/04, 90/05, 57/06, 146/08, 80/10, 22/12, 148/13, 143/14, 50/16, 115/16.

<sup>3</sup> Ordinance on the procedure for adopting advance pricing agreements, Official Gazette, No. 42/2017.

#### 4.1. On the interaction between EU state aid law and member states' tax systems

Before we delve deeper into the analysis of state aid implications for tax ruling schemes in EU MS, it seems worthwhile to briefly address the fundamentals of EU state aid control and particularly its influence for tax policy of individual MS. The foundations of EU state aid law are set in primary EU law, more precisely in Art. 107(1) of the Treaty on the Functioning of the EU (TFEU), which reads: "Save as otherwise provided in the Treaties, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market." According to the settled case-law of the ECJ, there are four cumulative conditions embedded in the notion of state aid under Art. 107(1) TFEU (Kronthaler, Tzuberly, 2013, p. 94-95): (1) a measure has to be granted by a MS or financed through state resources; (2) an economic advantage has to be conferred on the recipient, relieving him from the burden normally borne; (3) the advantage conferred is "selective or specific", i.e. it favours only certain undertakings or the production of certain goods; (4) the measure in question has an effect on competition and trade between EU MS. Only if each of these cumulative conditions is met, there is a state aid incompatible with the internal market (Fort, 2017, p. 375). The rationale of state aid control within the EU is related to the overarching goal of ensuring level playing field in the internal market (Kronthaler, Tzuberly, 2013, p. 94). Hence, state aid law may be perceived as a subpart of a much wider area of the EU competition law. Against the background of a wide notion of state aid, prescribed in the TFEU, it seems self-evident that elements of MS tax systems may also bring about state aid concerns. This holds in particular as regards to the so-called "tax expenditures", i.e. instruments by virtue of which a state fails to collect a part of tax revenue it is normally entitled to (Luja, 2003, p. 8-10). In other words, whenever a special domestic rule results in the non-taxation of a part of taxpayer's economic faculty, which would be taxed in the absence of such rule, there is a looming shadow of state aid scrutiny. In 1998 EC issued a notice addressing the interaction between MS direct tax systems and state aid law (European Commission, 1998). In essence, this document laid down the analytical framework for assessing compatibility of domestic direct tax measures with EU state aid law. First, it was explained that there are three main ways how a tax measure leads to economic advantage for undertakings: (1) reduction in the tax base (e.g. special deductions, special or accelerated depreciation arrangements or the entering of reserves on the balance sheet); (2) total or partial reduction in the amount of tax (such as exemption or a tax credit); (3) deferment, cancellation or even special rescheduling of tax debt (European Commission, 1998, para. 9). Second, the EC clarified that any loss of tax revenue, including that resulting from the administrative practice of tax authorities, is equal to consumption of State resources. Third, it has been made clear that the criterion of "effect on EU competition and trade" would be satisfied very easily, since it suffices that the beneficiary of a tax advantage exercises an economic activity. Finally, regarding the criterion of selectivity, the EC explained that selective tax measure may derive from an exception to the tax provisions of a legislative, regulatory or administrative nature or from a discretionary practice on the part of the tax authorities. However, such measures may be justified by "the nature or general scheme of the system" (European Commission, 1998, para. 12). As has been hinted already in the 1998 Notice by the EC, the subsequent ECJ jurisprudence confirmed that the crux of applying state aid rules to domestic tax measures lies at the analysis of selectivity.<sup>4</sup> The EC and the ECJ use a three-step derogation test in evaluating whether pertinent tax measure is selective (Micheau, 2011, pp. 201-204). In the first step, one has to identify the system of reference, i.e. the collection of tax rules that are generally applicable to the undertakings in question. In the second step, one should determine whether a given measure

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<sup>4</sup> See especially Case *European Commission (C-106/09 P) and Kingdom of Spain (C-107/09 P) v Government of Gibraltar and United Kingdom of Great Britain and Northern Ireland*, EU:C:2011:732.

constitutes derogation from the system of reference insofar as it differentiates between economic operators who, in light of the objectives intrinsic to the system, are in a comparable factual and legal situation (European Commission, 2016, para. 128). If the deviation from the reference framework, i.e. *prima facie* selectivity, is established, then, in the third and final step, one needs to address whether such derogation is justified by the nature or the general scheme of the (reference) system, thus falling outside the scope of Art. 107(1) TFEU. In essence, this selectivity test amounts to an analysis from the standpoint of equality between economic operators (Lang, 2016, p. 36). If the measure in question results in unequal tax treatment of legally and factually comparable undertakings, then the selectivity criterion is *prima facie* fulfilled (Micheau, 2011, p. 202). It is also apparent that the final conclusion on selectivity largely depends on the selection of the system of reference. Put simply, the wider the chosen reference system, more likely it is that the given measure constitutes a derogation (Micheau, 2011, p. 204). It is therefore vital to draw attention to EC's view that the reference system may be, in most cases, equated with the general system of imposing an individual type of tax (European Commission, 2016, para. 134). According to this view, a tax advantage conferred to corporate taxpayers should be assessed against the backdrop of the general system of corporate income tax employed in a given country. Furthermore, for the purposes of this paper, it is important to underline that, in assessing compatibility of APAs with EU internal market, EC shares the view that the arm's length principle (hereinafter: ALS) forms part of reference system applicable to MNCs (European Commission, 2016, para. 172).

#### **4.2. Tax rulings and APAs as incompatible state aids: the example of Apple case**

Already in its 1998 Notice, the EC has issued a telling warning on how discretionary practices of MS' tax authorities may constitute state aid under Art. 107(1) TFEU. Of particular interest is how the EC drew attention to the lack of transparency of tax rulings schemes, which amounts to one of their biggest disadvantages from a general tax policy perspective (Lang, 2015, pp. 394-395). However, it wasn't until the recent wave of EC investigations into MS' rulings schemes (see *supra*) that their potential conflict with EU state aid law drew serious attention. As explicitly described in the 2016 EC Notice on the notion of state aid: "(W)here a tax ruling endorses a result that does not reflect in a reliable manner what would result from a normal application of the ordinary tax system, that ruling may confer a selective advantage upon the addressee, in so far as that selective treatment results in a lowering of that addressee's tax liability in the Member State as compared to companies in a similar factual and legal situation" (European Commission, 2016, para. 170). Moreover, the EC listed three categories of cases where a tax ruling confers selective advantage: (1) the ruling endorses a misapplication of domestic tax law, leading to lower tax burden; (2) availability of ruling scheme is limited to only some taxpayers; (3) the ruling endorses a tax treatment for an undertaking which is more favourable than in respect of taxpayers who are legally and factually comparable (European Commission, 2016, para. 174). Recent activism of the EC regarding administrative tax practices in MS has been particularly focused on APAs. In this respect, EU state aid provisions have played a role in curbing international tax avoidance by largest MNCs. The reasoning of the EC in the (in)famous Apple case, decided in 2016,<sup>5</sup> will be used in this section to illustrate how transfer pricing outcomes enshrined in APAs may be put to scrutiny from the EU level. In its negative decision with recovery, the EC held that the two tax rulings issued by the Irish tax authorities – first one in 1991, second one in 2007 – in favour of two Irish-incorporated companies within the Apple group constituted illegal state aid. Factual substratum of the case involved a rather simple international tax planning scheme employed by Apple group in order

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<sup>5</sup> Commission Decision (EU) 2017/1283 of 30 August 2016 on State aid SA.38373 (2014/C) (ex 2014/NN) (ex 2014/CP) implemented by Ireland to Apple (notified under document C(2017) 5605 (hereinafter: EC Apple decision)).

to minimize its overall tax burden from the operations in the EMEIA area (Europe, Middle East, Africa and India). Without going into too much detail, the sales of Apple products to EMEIA customers were attributed for legal, accounting and tax purposes to an Irish-incorporated entity (Apple Sales International; hereinafter: ASI). However, ASI is a classical example of a double non-resident, i.e. a company that, due to a perfect mismatch between relevant rules of Irish and US domestic tax law (Wattel, 2016, p. 798), is not considered to be a tax resident in any country. Therefore, ASI had to pay taxes only with regard to profits that may be attributed to its Irish branch, on the basis of source principle. Accordingly, this is a classical transfer pricing case involving attribution of profits to permanent establishments (PEs). In the first tax ruling issued in 1991, Irish tax authorities, upon negotiation with the representatives of Apple, agreed on a specific method for attributing profits to Irish branches of ASI and its immediate parent company Apple Operations Europe (hereinafter: AOE). Put simply, profits that would be taxable in Ireland were calculated on the basis of operating expenses incurred by the branches, which is very similar to the transactional net margin method (TNM) provided in the OECD Transfer Pricing Guidelines. With some deviations, similar method of calculating profits of Irish branches was endorsed in the 2007 tax ruling.<sup>6</sup> The effect of applying such methodology in calculating taxable base of Irish branches is that the vast majority of profits derived from the sales of Apple products in the EMEIA market was taxed nowhere. This is mainly a consequence of the fact that Irish tax authorities shared the view that Irish PEs of ASI and AOE were performing only routine functions and economic ownership over valuable intangibles may not be attributed to them.<sup>7</sup> The material effect of such profit attribution is that effective tax burden of ASI amounted to less than 1% on a yearly basis. Against this factual background, the EC held that the Irish tax rulings conferred an economic advantage to Apple, in that corporate tax liability of ASI and AOE was lowered in comparison to what was prescribed by the "ordinary" rules of Irish corporate income tax.<sup>8</sup> Moreover, such economic advantage is selective, since it entails an unjustified derogation from the relevant system of reference, which is formed by the general rules for taxation of corporate income in Ireland. Accordingly, all companies subject to tax in Ireland – including resident and non-resident companies – are in a comparable legal and factual situation. The fact that Irish subsidiaries of Apple group are not standalone companies but rather part of an integrated group does not change this basic assumption, according to the EC.<sup>9</sup> Main argument in favour of finding a selective tax advantage revolved around the misapplication of the arm's length standard (ALS) by the Irish tax authorities. Most remarkably, the EC shares the view that ALS is derived directly from Art. 107(1) TFEU, since its goal is to ensure neutrality between economic operators (European Commission, 2016, para. 172). Thus, even if Ireland did not have domestic transfer pricing rules in place at the time of the issuance of the first ruling, revenue bodies should have pursued an ALS outcome in profit allocation.<sup>10</sup> This inevitably leads to the conclusion that the ALS has a new function: not only is it used to allocate profits within MNCs, but it is also a part of competition law, aimed at preserving level playing field in the EU internal market (Wattel, 2016, p. 792). While a more detailed analysis of transfer pricing aspects of this case lies outside the scope of the present paper, we may highlight two main reasons why the EC held that contested tax rulings departed from the ALS: (1) Irish revenue bodies' assumption that royalties related to Apple intangible property may not be allocated to Irish PEs is uncorroborated; (2) on a subsidiary line of reasoning, Irish revenue bodies used inappropriate methodology for attributing profits to Irish PEs of ASI and AOE.

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<sup>6</sup> See paras. 59-62 of the EC Apple decision.

<sup>7</sup> See para. 195 of the EC Apple decision.

<sup>8</sup> See para. 223 of the EC Apple decision.

<sup>9</sup> See para. 228-229 of the EC Apple decision.

<sup>10</sup> See para. 255 of the EC Apple decision.

Which conclusions may be drawn from the EC reasoning in Apple case and other cases involving tax rulings and APAs? First, the EC has hitherto focused only on the outliers, i.e. on the cases that constitute radical departures from international standards, such as those embodied in the OECD Transfer Pricing Guidelines. The EC seems to acknowledge the reality of transfer pricing: it is more an art than exact science and various ALS outcomes may be appropriate in a given set of facts (Kardachaki, Van Hulten, 2017, p. 285). Second, APAs are not selective *per se*: if tax authorities abide to the international standards in allocating profits to MNEs, there is minimal risk of incompatibility with EU state aid provisions. Third, transfer pricing documentation plays a significant role in proving that tax authorities gave serious thought to all facts-and-circumstances in approximating final tax outcome.

## 5. CONCLUDING REMARKS

The usage of advance tax rulings and APAs seems to be a necessity in modern tax systems. In the light of complex and often extremely technical tax legislation, coupled with the factual intricacies related to cross-border trade and investment, these instruments provide a way to avoid disputes between tax authorities and taxpayers even before they may arise. Accordingly, the main rationale behind such administrative practices is found in the promotion of legal certainty. Moreover, tax rulings and APAs are conceptually based on the new understanding of the tax relationship, commonly branded as “enhanced relationship” or “co-operative compliance”. While Croatian experience in this field has hitherto been severely limited, in times ahead greater usage of rulings schemes should be expected. Namely, advance rulings became part of Croatian tax system only in 2015, and APAs may be obtained only as of January 1<sup>st</sup> 2017. One may expect a rather cautious approach of the tax authorities in granting tax benefits to specific taxpayers via advance rulings or APAs (Bogovac, 2016, pp. 279-282). However, in the present paper we tried to emphasize the need for taxpayers and tax authorities to keep track of the important developments at the EU level, i.e. new wave of EC investigations into ruling practices in a number of states. Against this background, there are some lessons to be drawn especially for Croatian tax authorities. First, in granting a tax ruling or an APA special consideration has to be made to the analytical framework followed by the EC and ECJ in assessing the compatibility of a ruling with EU state aid law. In other words, tax authorities need to precisely identify the benefits they are potentially giving to the taxpayer, in light of the reference system composed of general rules for a specific type of tax. If there is a derogation from this reference system, the only way to escape conflict with state aid law is to provide a reasonable justification. Second, the most pragmatic way to avoid potential state aid concerns, particularly when it comes to APAs, is that all stakeholders in Croatia abide the international standards, such as transfer pricing soft-law rules enshrined in OECD Transfer Pricing Guidelines. In this respect, there is some optimism, since Croatian tax authorities have traditionally followed the OECD’s approach in transfer pricing enforcement. Undoubtedly, the focus in the future will be on reliable transfer pricing documentation proving that the chosen methodology is appropriate for a given case. This will help to avoid state aid scrutiny, since the alignment between EU internal market and arm’s length principle is a new mantra pursued by the European Commission.

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## DIGITAL TECHNOLOGY USAGE IN THE MACEDONIAN CIVIL SOCIETY SECTOR

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### ABSTRACT

*Nowadays, social networks and social media are getting increasingly more popular and are being utilized by a variety of users. When it comes to the usage of social networks and social media by civil society organizations, organizations themselves should compulsorily think through the prism of strategic placement of their communications. Organizations have to pay more attention on creating complete communication strategies, with the possibility of creating an additional strategy for the usage of social networks and social media. The main aim of this paper is to illustrate how these organizations utilize social networks. The general conclusion of this paper would be that social networks are being used by civil society organizations in Republic of Macedonia and they help in administering their projects. Greater strategic thinking and planning is needed nevertheless, so that the entire potential social media offer could be utilized by the Macedonian civil sector.*

**Keywords:** *social networks, social media, civil associations, functionalities, strategies*

### 1. INTRODUCTION

Facebook is currently the most popular social network in the world, with 1.44 billion active users on a monthly basis, in the first three months of 2015 (Statista, 2015). In comparison, Twitter has been used by 236 million active users worldwide (Statista, 2015). In Macedonia, the same situation can also be noticed, where the most used social network is Facebook (Business Culture, 2015). Statista, one of the largest portals for collecting statistical data, emphasizes that for the year of 2014, penetration of social media in the Republic of Macedonia amounts to 51% (Statista, 2015). This data suggests that half of Internet users have logged in to one of the existing social networks, at least once in a month. Hence, the logical conclusion can be derived that the highest percentage of Internet users, using social networks, are in fact using Facebook. According to the research conducted by the Macedonian Center for International Cooperation called "Usage of Social Media by Civil Society Organizations in the Republic of Macedonia" (Buldioski D., Ristovski B., 2011, pg.25-50), the most used social network by civil society organizations is Facebook (84%), then Twitter (33%) and YouTube (30%). According to this research, there are three noted ways of using Facebook by Macedonian civil society organizations and what is more: Facebook page, Facebook group and Facebook profile, out of which the most commonly used is the Facebook page. It is for these reasons that

my research will hereafter focus only on Facebook and its use by civil society organizations, done through already existing models for analyzing the usage of Facebook

## **2. EMPIRICAL RESEARCH ON SOCIAL MEDIA USAGE BY MACEDONIAN CIVIL SOCIETY**

An already established analysis model on how non-profit organizations use social media, social networks and specifically Facebook, was used as a basis for this research (Waters et al., 2011). The survey itself for this research was created on the basis of an already existing questioner (Waters et al., 2011). During the entire research process, the research ethics was acknowledged. The usage of this model and that of the survey questionnaire, have been approved by the research team from North Carolina State University. The main research question is focused on how civil society organizations (non-profit organizations) incorporate strategies for developing relations with the end users on their Facebook user accounts. In the lack of a suitable classification of this type of organizations at a local level, the classification of the American Association of Fundraising Professionals was used for the purposes of the research. This classification was offered in the above mentioned research, classifying the non-profit sector in six sub-categories: art and humanities, education, social services, public/ societal utility, religion and other (i.e. organizations which cannot be included in any of the above mentioned categories). Using this classification of Waters (2009) concludes that organizations working in the field of education and social services use more interactive elements and are more active in communicating with their stakeholders. Hence, an additional research sub-question is imposed i.e. whether there are any differences in the usage of social media, in terms of the working field of the organization. Moreover, the respective research was enriched with a locally based research sub-question i.e. whether organizations note differences in the usage of social media, based on their membership in the National Youth Council of Macedonia. The assumption is that all organizations, which are members in this Council are youth organizations or organizations for young people and they would therefore be more skilled in the usage of social media. In order to get the full picture of social networks usage in Macedonia, these additional questions are also included in this research: Do organizations have strategies for social media usage (especially Facebook) and what tools (options) do organizations use the most, from those available on Facebook.

### **2.1. Research Methodology**

For the purpose of this research 269 civil society organizations were included. At the beginning of the research, more than 2000 civil society organizations were contacted. Part of the organizations, although registered as civil society organizations were no longer active. The rest of the organizations didn't use any online tools at all, while there were also those that although being present online, didn't use any social networks, i.e. mainly Facebook. That is why the sample itself has been reduced to 269 civil society organizations. A total of 20 questions were introduced, out of which 18 were variables of the first two questions, in order to answer the established research questions. Later through coding, the first question was inferred with: pertaining of civil society organizations to one of the six sub-categories and their usage of social networks, and membership in the National Youth Council of Macedonia and their different usage of social networks. The presence and usage of social networks in this research was evaluated through descriptive and correlation analysis. The general parameters refer to the usage of different tools when making the decision for using social networks, having a separate social media strategy, holding a separate team managing all social media and social networks user accounts, using different user accounts, conducting Monitoring and Evaluation, as well as possessing different forms of Facebook user accounts (fan page, profile or group). Presentation of how the usage of social networks is organized includes questions referring to the publishing

of the program and services organizations offer, the history of organizations, their mission, a link for accessing their web-pages, their logos, the names of persons responsible for managing Facebook user accounts, as well as their emails. Dissemination of information was measured through the different forms of sharing content on Facebook: images, videos, audio-recordings, original statuses, initiating debate, publishing press/public-releases and sharing summaries of already conducted campaigns. The interaction with users was demonstrated through donating and volunteering opportunities, publishing an activity calendar, available access to organization's email, responding to Facebook messages and sharing of posts published by the users. When examining these occurrences, the probability ranged from 0.91 to 0.95 for all variables and their correlation was demonstrated through using the Chi-square test. For this research were defined 36 hypothesis and they were tested in relation with the 2 research question : pertaining of civil society organizations to one of the six sub-categories and their usage of social networks, and membership in the National Youth Council of Macedonia and their different usage of social networks.

### *2.1.1. Descriptive analysis*

The descriptive analysis shows that from the examined sample of organizations, the largest part belongs to the category of public i.e. societal utility (36.80%). Somewhat smaller percentage falls off to the categories "other" (26.77%), education (15.61%), social services (12.27%) and art and humanities (8.18%). Organizations working in the domain of religion are symbolically represented (0.37%) in the research. When it comes to organizations' membership in the National Youth Council of Macedonia, the majority (78.81%) of the examined legal entities are not members of this body, whereas a proportionally lesser part (21.19%) are its members. In terms of whether organizations use specific tools when making the decision for starting the usage of social media, an enormous 71% responded that they don't use such tools. On the fourth question, referring to the application of a specific strategy for social media usage by organizations 45% of the organization responded positively, while 55% gave a negative answer. To the question of whether organizations have a separate team, whose only task is managing social networks and social media user accounts, 43% of the organizations responded that they do have such a team, while 57% gave a negative answer. In regards to which social networks are being used by organizations, 98% from the examined entities responded that they use Facebook, 49% use YouTube, 45% are using Twitter, 20% use LinkedIn, while only 11% of the organizations use Instagram or some other social network. The seventh question in this research refers to whether organizations measure their success from the usage of social networks and social media, i.e. whether they conduct Monitoring and Evaluation. 52.8% of the organizations gave positive response, while 47, 2% stated that they are not using any Monitoring and Evaluation tools. In continuation of this research, all research questions refer specifically to the usage of Facebook as a social network, by the organizations. That is why the next question refers to whether organizations prefer using Facebook fan page, Facebook group or Facebook profile, when it comes to the usage of Facebook. 73.6 % of the organizations said they use Facebook fan page, 43.9% use Facebook group, whereas 37, 5% of them use Facebook profile. The next question refers to the information organizations themselves offer on their Facebook fan pages, groups or profiles. Largest part of the organizations 81.4% highlight their logo on Facebook user accounts, 77.3% describe the programs and services offered by organizations, 70.6% have a link for accessing organization's webpage, 64.3% point out the organization's mission, 48.3% the organization's history, 33.5% of organizations offer emails for contacting the persons managing the Facebook accounts, while 15.6% show a list of persons' names, responsible for managing the respective accounts. The next question refers to which activities are most frequently undertaken by organizations for sharing (disseminating) information. The largest part of organizations (92. 6%) pointed out that they do so by sharing

latest news within their working field, 87.7% through sharing photos, 74.3% share press or public releases on Facebook, 67.7% publish videos, 50.9% share campaigns' summaries, 44.6% publish original statuses, 37.9% initiate debate, whereby 22.7% of them share audio-recordings. One of the question refers to whether organizations offer the possibility of contacting them through email, on their Facebook accounts. 85.1% of the organizations gave a positive response, while 14.9% gave a negative response. When it comes to the publishing of an activity calendar, 75.1% responded that they use the option for creating events, while 24.9% gave a negative response. Regarding the publishing of volunteering opportunities within organizations, 64.6% answered that they do publish such information on Facebook, whereas 35.4% gave a negative response. The next question refers to whether users publish posts about the organization itself on organization's Facebook account. 69.9% of the organizations responded positively, where 30.1% gave a negative answer. The next question is logically related to the previous one: "Do users publish posts on your Facebook account, not connected to your organization?" 43.1% responded positively, while 56.9% said their users don't have such practice.

### 2.1.2. Correlation analysis

In terms of the main and fundamental questions of this research, i.e. whether there are differences in regards to social media usage based on the working field of organizations and whether there are differences in regards to social media usage, based on organizations' membership in the National Youth Council, a correlation analysis with chi-square test has been used. A valid correlation is considered to be the one which is statistically proven through the value of the **P-quotient** being higher than the minimal **p=0,01**, guaranteeing correlation between the two occurrences even on a wider population level, outside of the measured sample. In regards to the different corelation fields, the statistical inference gave the following results: The statistical inference (chi-square test) shows that there is no correlation between (a) pertaining to one of the 6 examined categories of organizations with (b) the use or lack thereof of special tools when making the decision for starting the usage of social media ( $\chi^2=0,544$ ,  $df=5$ ,  $p>0,01$ ).

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1,035 <sup>a</sup>	5	,544
Likelihood Ratio	4,159	5	,527
Linear-by-Linear Association	,165	1	,685
N of Valid Cases	269		

Figure 1: Correlation between (a) pertaining to one of the 6 examined categories of organizations with (b) the use or lack thereof of special tools when making the decision for starting the usage of social media (Empirical research)

The statistical inference (chi-square test) shows there is no correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) having a specific strategy for the usage of social media ( $\chi^2=3,282$ ,  $df=5$ ,  $p>0,01$ ).

Figure following on the next page

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,282 <sup>a</sup>	5	,657
Likelihood Ratio	3,679	5	,596
Linear-by-Linear Association	1,686	1	,194
N of Valid Cases	269		

Figure2: Correlation between (a) pertaining to one of the 6 examined categories of organizations with (b) having a specific strategy for the usage of social media (Empirical research)

The statistical inference (chi-square test) shows that there's a statistically valid correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) using or non-using of Tweeter ( $\chi^2=12,979$ ,  $df=5$ ,  $p<0,05$ ). The qualitative insight into the chi-square (Figure 3) suggests that organizations from the field of education use this network proportionally less, compared to the categories social services and other. The statistical inference (chi-square test) shows that the correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) the use or lack thereof of LinkedIn is on the very margin of statistical validation ( $\chi^2=9,716$ ,  $df=5$ ,  $p=0,084$ ). That means there's no formal statistical proof for the correlation between these two variables, but still the existence of a certain relation between them is a probable tendency, which cannot be eliminated.

		most i hum. nauki 2 obrazovanie 3 socijalni usluga 4 javna koris religija 6 drugo						
		1	2	3	4	5	6	Total
Tweeter 1 0 da 0 ne	Count	12	15	23	51	1	46	148
	Expected Cou	12,1	23,1	18,2	54,5	,6	39,6	148,0
1	Count	10	27	10	48	0	26	121
	Expected Cou	9,9	18,9	14,8	44,5	,4	32,4	121,0
Total	Count	22	42	33	99	1	72	269
	Expected Cou	22,0	42,0	33,0	99,0	1,0	72,0	269,0

Figure3: Correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) using or non-using of Tweeter (Empirical research)

The statistical inference (chi-square test) shows that there's a statistically valid correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) offering email contact addresses of Facebook administrators in the respective organization ( $\chi^2=11,685$ ,  $df=5$ ,  $p<0,05$ ). The qualitative insight into the chi-square suggests that organizations from the fields of education and social services offer their email contact addresses proportionally less than those from the category other. The analysis shows that the correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) sharing photos as a strategy for dissemination is on the very margin of statistical validation ( $\chi^2=9,305$ ,  $df=5$ ,  $p=0,098$ ). That means there's no formal statistical proof of the correlation between these two variables, but still the existence of a certain relation between them is a probable tendency, which cannot be eliminated. The statistical inference (chi-square test) shows that the correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) publishing original statuses as a strategy for dissemination, is on the very margin of statistical significance ( $\chi^2=9,266$ ,  $df=5$ ,  $p=0,099$ ). That means there's no formal statistical proof of the correlation between these two variables, but still the existence of a certain relation between them is a probable tendency, which cannot be eliminated. The analysis shows that the correlation between (a) the pertaining to one of the 6 examined categories of organizations with (b) publishing posts about the organization itself by the users, is on the very margin of statistical validation ( $\chi^2=10,933$ ,  $df=5$ ,  $p=0,053$ ). That means there's no formal statistical proof of the

correlation between these two variables, but still the existence of a certain relation between them is a probable tendency, which cannot be eliminated. It is statistically confirmed ( $\chi^2=9,655$ ,  $p<0,01$ ) that organizations which are members in NYCM have frequently more Twitter user accounts, in comparison to organizations, which are not members in NYCM. Furthermore, it is also evident that membership in NYCM is a factor of difference between the examined organizations, when it comes to the usage of Facebook groups as well. The statistical examination ( $\chi^2=7,317$ ,  $p<0,01$ ) shows that organizations which are members in NYCM, more frequently have a Facebook group than others. Yet another statistically confirmed regularity ( $\chi^2=4,578$ ,  $p<0,05$ ) is sharing of the latest news within the working field, whereby organizations which are members in NYCM use this tool somewhat less than other organizations. The inference of these data reveals yet another regularity, which is statistically confirmed ( $\chi^2=8,252$ ,  $p<0,01$ ), i.e. organizations which are members in the NYCM publish volunteering opportunities more frequently than other organizations.

### 3. CONCLUSION AND DISCUSSION

Analyzing the 269 civil society organizations and their strategies for social media usage, especially Facebook, it can be generally concluded that less than a half of the organizations pay special attention to these communication tools, i.e. less than a half of the organizations have a separate strategy and a separate team, working on this particular issues. Nevertheless, it is important emphasizing in this context that almost all examined organizations use Facebook (98%), whereas a lot lower percentage use other social networks. In terms of the parameters upon which this research was created, it can be accentuated that regarding the general use of social networks, half of the organizations (52.8%) conduct Monitoring and Evaluation of their user accounts and review the effects these accounts cause in the work of the organization. This fact unequivocally indicates that organizations themselves recognize the power of social networks in building long-term strategies and relations with the targets and end users. Within the frame of the same parameter, when it comes to using Facebook, non-profit organizations mark a tendency of using Facebook fan pages as a way of communication with the users. The analysis of the data with a chi-square test enabled the adoption or rejection of the above-mentioned hypotheses. Hence, as statistically most valid i.e. approved are the hypotheses H4 (for using Twitter), H7, H22 (in the part of using Twitter and YouTube), H24, H26, H31 and H36. Hypotheses H4 (when it comes to the use of LinkedIn), H8 (for sharing images and original statuses), H15 and H25 (for sharing links on Facebook leading to organizations' webpages) are on the very margin of statistical validation. The results from the research show that the working field of organizations doesn't affect the kind of Facebook strategy they're having. However, organizations differ depending on their working field, when it comes to the use of Twitter and LinkedIn. Thus, organizations dealing with social services and others (sport clubs or the like), realize the importance of Twitter as an additional tool for maintaining contact with end users. On the other hand, although on the margin of statistical validation, organizations working in the field of education know the importance of using LinkedIn for building a professional image and reputation of the organization. Contacting users through email is more offered by organizations not working in any of the main working fields (art/ humanities, education, social services, public/ social utility and religion). As has already been accentuated, organizations should compulsorily share their email addresses and the emails of the persons managing the accounts, for maintaining proper relations with end users. The sharing of images, original statuses and posts by users themselves, differs depending on the working field of organizations. Organizations offering social services and those under the category others are most active in using these functionalities, and all the other organizations from the sector should follow their example, as that is one of the ways for successful cooperation and for attracting the targets for which the organizations are created in fact.



The main difference in using social media by organizations which are members in the National Youth Council and those that are not, are the following ones: differences based on this membership are seen in the more intensive use of Twitter by organizations which are members in NYCM, usage of Facebook groups, the content on Facebook user accounts i.e. offering links for accessing the webpage of the respective organization, sharing of latest news within the working field of organizations, publishing volunteering opportunities and receiving negative comments by Facebook users.

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## **COST-EFFECTIVENESS ANALYSIS OF HELICOBACTER PYLORI DIAGNOSTIC METHODS**

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### **ABSTRACT**

*Objective of the study: The aim of the research is to make literature review related to the helicobacter pylori link to gastric cancer and cost effectiveness of helicobacter pylori diagnostic methods.*

*Method: literature review.*

*Results: Cancer constitutes an enormous burden on society in more and less economically developed countries alike. The occurrence of cancer is increasing because of the growth and aging of the population, as well as an increasing prevalence of established risk factors such as smoking, overweight, physical inactivity, and changing reproductive patterns associated with urbanization and economic development. Based on GLOBOCAN estimates, about 14.1 million new cancer cases and 8.2 million deaths occurred in 2012 worldwide. Despite a worldwide decline in incidence, gastric cancer remains a major health concern. It ranks as the fourth most common cancer and the second most frequent cause of death from cancer, accounting for 10.4% of cancer deaths worldwide. Each year, approximately 900 000 people are diagnosed with the disease and around 700 000 people die from it.*

*Conclusions: Helicobacter pylori is recognized as one of the most significant risk factors for gastric cancer, and H. pylori eradication has been proposed as a possible primary chemopreventive strategy to reduce gastric cancer incidence. A meta-analysis of seven randomized controlled trials concluded that H. Pylori eradication reduces gastric cancer incidence by 35%.*

**Keywords:** *Gastric cancer, Efficiency, Screening*

### **1. INTRODUCTION**

Cancer constitutes an enormous burden on society in more and less economically developed countries alike. The occurrence of cancer is increasing because of the growth and aging of the population, as well as an increasing prevalence of established risk factors such as smoking, overweight, physical inactivity, and changing reproductive patterns associated with urbanization and economic development. Based on GLOBOCAN estimates, about 14.1 million new cancer cases and 8.2 million deaths occurred in 2012 worldwide. Over the years, the burden

has shifted to less developed countries, which currently account for about 57% of cases and 65% of cancer deaths worldwide. Lung cancer is the leading cause of cancer death among males in both more and less developed countries, and has surpassed breast cancer as the leading cause of cancer death among females in more developed countries; breast cancer remains the leading cause of cancer death among females in less developed countries. Other leading causes of cancer death in more developed countries include colorectal cancer among males and females and prostate cancer among males. In less developed countries, liver and stomach cancer among males and cervical cancer among females are also leading causes of cancer death. Although incidence rates for all cancers combined are nearly twice as high in more developed than in less developed countries in both males and females, mortality rates are only 8% to 15% higher in more developed countries. This disparity reflects regional differences in the mix of cancers, which is affected by risk factors and detection practices, and/or the availability of treatment. Risk factors associated with the leading causes of cancer death include tobacco use (lung, colorectal, stomach, and liver cancer), overweight/obesity and physical inactivity (breast and colorectal cancer), and infection (liver, stomach, and cervical cancer). A substantial portion of cancer cases and deaths could be prevented by broadly applying effective prevention measures, such as tobacco control, vaccination, and the use of early detection tests (Torre et al., 2015). Despite a worldwide decline in incidence, gastric cancer remains a major health concern. It ranks as the fourth most common cancer and the second most frequent cause of death from cancer, accounting for 10.4% of cancer deaths worldwide. Each year, approximately 900 000 people are diagnosed with the disease and around 700 000 people die from it (Fuccio, Zagari, Minardi, & Bazzoli, 2006).

## **2. LITERATURE REVIEW AND FINDINGS**

Gastric cancer is the fourth most common cancer and second leading cause of cancer-related death worldwide. Almost 1 million people are newly diagnosed with stomach cancer each year and more than 700,000 people die of the disease. Stomach cancer accounts for 8% of the total cancer cases and 10% of total cancer deaths. Over 70% of new cases and deaths occur in developing countries (Figure 1) (Jemal, Bray, Center, & Ferlay, 2011; Torre et al., 2015).

*Figure following on the next page*

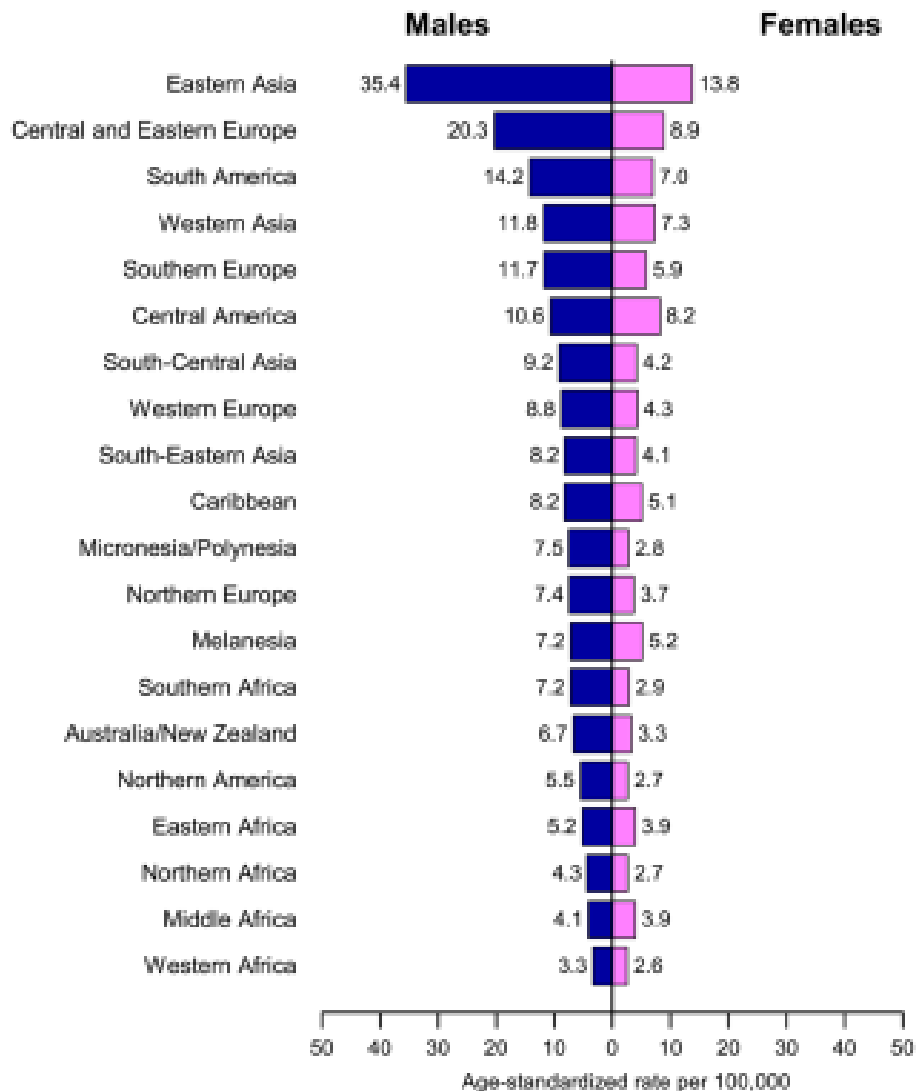


Figure 1: Stomach Cancer Incidence Rates by Sex and World Area, age-standardised incidence per 100,000 population, 2012, by sex (Torre et al., 2015)

Eastern Asia, Eastern Europe, and South America have the highest incidence of stomach cancer, whereas in North America and most parts of Africa the lowest rates can be found. Generally, stomach cancer rates are about twice as high in males as in females. Gastric cancer is second leading cause of cancer-related death worldwide. A meta-analysis of seven randomized controlled trials concluded that *H. Pylori* eradication reduces gastric cancer incidence by 35%. Current consensus is that *H. Pylori* screening and treatment is cost-effective only in high-risk populations (Lansdorp-Vogelaar, 2013). *Helicobacter pylori* is recognized as one of the most significant risk factors for gastric cancer, and *H. pylori* eradication has been proposed as a possible primary chemo-preventive strategy to reduce gastric cancer incidence (Chey, Leontiadis, Howden, & Moss, 2017). The most important recognized risk factors are *Helicobacter pylori* infection and host genetic factors, such as a positive family history for gastric cancer and/or a genetic pro-inflammatory profile. Environmental and nutritional factors also seem to be important.<sup>3–5</sup> *Helicobacter pylori* has been classified as a group I carcinogen for gastric cancer by the International Agency for Research on Cancer (IARC), a branch of the World Health Organization<sup>6</sup> and, more recently, *H. pylori* eradication has been proposed as a possible primary chemo-preventive strategy to reduce gastric cancer incidence. However, the effectiveness of this approach has not yet been clearly demonstrated,<sup>7</sup> mainly because of the

difficulties in conducting properly designed interventional studies. Nevertheless, several authors have attempted to produce new insights in this field and, in recent years, a number of relevant studies have been published (Fuccio et al., 2006). The association between gastric cancer and *H. pylori* infection has been mainly based on large-scale epidemiological studies, meta-analysis of case-control studies and experimental models. Several prospective case-control studies have attempted to evaluate the link between *H. pylori* infection and the development of gastric cancer, without always showing consistent results. To overcome this problem of variation between studies and to attempt to provide more definitive results, several authors have performed meta-analyses. In 2001, Forman and the Helicobacter and Cancer Collaborative Group performed a meta-analysis which only considered studies nested within prospective cohorts. They showed a significantly positive association between *H. pylori* infection and non-cardia cancer, with an overall odds ratio (OR) of 2.97 [95% confidence interval (CI): 2.34–3.77] (Fuccio et al., 2006; Helicobacter and Cancer Collaborative Group, 2001). No such association was demonstrated for *H. pylori* and cardia cancer. A more recent meta-analysis specifically assessed the effect of *H. pylori* *cagA* status on the development of gastric cancer. A comprehensive literature search identified 16 qualified studies with 2284 cases and 2770 controls. *H. pylori* and *cagA* seropositivity significantly increased the risk for gastric cancer by 2.28- and 2.87-fold, respectively. Among *H. pylori*-infected populations, infection with *cagA*-positive strains further increased the risk for gastric cancer by 1.64-fold (95% confidence interval [CI], 1.21-2.24) overall and by 2.01-fold (95% CI, 1.21-3.32) for noncardia gastric cancer. Gastric cancer at the cardia is not associated with *H. pylori* infection or *cagA*-positive strains of *H. pylori*. Patient age and site of gastric cancer contributed to the heterogeneity between studies. Infection with *cagA*-positive strains of *H. pylori* increases the risk for gastric cancer over the risk associated with *H. pylori* infection alone. Searching for *cagA* status over *H. pylori* infection may confer additional benefit in identifying populations at greater risk for gastric cancer (Huang, Zheng, Sumanac, Irvine, & Hunt, 2003). The strong causal link between *H. pylori* and gastric cancer presents a unique opportunity for considering antibiotic eradication treatment as a chemo-preventive strategy against a neoplastic disease. Interventional studies would confirm whether eradication of *H. pylori* prevents the development of gastric cancer. However, as the disease has a relatively low incidence and a long natural history, in order to be informative these studies would need to enrol thousands of subjects and last for decades. A recent theoretical model estimated that in order to demonstrate a 50% reduction in the expected increase of gastric cancer incidence after *H. pylori* eradication in a high-risk country, a sample size of 17 625 middle-aged subjects per group, followed for 10 years, would be required. Unfortunately, such interventional studies are unrealistic because of logistical, methodological and financial problems (Fuccio et al., 2006; Graham, 2005). *Helicobacter pylori* infection is associated with gastric cancer, but the effect of eradication treatment on gastric cancer risk is not well defined. Carried out meta-analysis showed that overall, 37 of 3388 (1.1%) treated patients developed gastric cancer compared with 56 of 3307 (1.7%) untreated (control) participants. In a pooled analysis of 6 studies with a total of 6695 participants followed from 4 to 10 years, the relative risk for gastric cancer was 0.65 (95% CI, 0.43 to 0.98). *Helicobacter pylori* eradication treatment seems to reduce gastric cancer risk (Fuccio et al., 2009). Another research shows that *Helicobacter pylori* infection always causes chronic gastritis and triggers several gastroduodenal pathologies ranging from peptic ulcer disease to gastric cancer. It is well established that *H. pylori* eradication decreases the incidence of gastroduodenal ulcer and its recurrence. However, despite being accepted as the critical risk factor for gastric cancer, there is no conclusive evidence that *H. pylori* eradication decreases the incidence of gastric cancer. Bacterial virulence characteristics, as well as genetic predisposition of the host in conjunction with certain environmental conditions, are the major factors which influence the development of gastric cancer. Preclinical and clinical data suggest

that reversibility of precancerous lesions (atrophic gastritis and intestinal metaplasia) is possible in some patients after *H. pylori* eradication. Since neoplastic lesions do not progress or even regress in some cases - after *H. pylori* eradication, eradication therapy should be considered even in patients with precancerous lesions. Nonetheless, progression of atrophic gastritis and intestinal metaplasia into cancer has been also demonstrated in patients after *H. pylori* eradication, suggesting that there might be a point of no return where genetic changes have already happened and are irreversible despite elimination of the triggering carcinogen (*H. pylori*). At the present time the clinical decision to treat a patient is based on established risk profiles. A general screen-and-treat policy, although desirable, currently awaits a less complex treatment regimen (Malfertheiner, Fry, & Mönkemüller, 2006). *Helicobacter pylori* infection continues to play a key role in gastric diseases. Colonization of the gastric mucosa with the bacterium invariably results in the development of chronic gastritis and subsets of patients have a progression of the chronic gastritis to either ulcer or cancer. Epidemiological evidence indicates that the proportion of all gastric cancers attributable to *H. pylori* infection, and hence potentially preventable upon elimination of this risk factor, is somewhere in the range of 60% to 90%. This portends significant benefit in terms of morbidity and mortality, not least in populations with high prevalence of *H. pylori* infection coupled with high incidence of gastric cancer. The effect of prophylactic *H. pylori* eradication on gastric cancer incidence in humans remains unknown, however. Results from randomized trials are eagerly awaited, but availability of strong conclusive results may take many years. A growing number of studies show considerable variation in risk for gastric cancer development, depending on *H. pylori* strain type and the genetic predisposition of the host. There is also a remote possibility that elimination of the infection may have adverse health implications (e.g., antibiotic resistance), and therefore "simple" risk stratification and targeted chemoprevention is required. Based on "in depth" evidence presented at this workshop, the majority of the scientific task force favored a search-and-treat strategy in first-degree relatives of gastric cancer patients and an overwhelming majority felt that a more general screen-and-treat strategy should be focused in the first instance on a population with a high incidence of *H. pylori*-associated diseases (Malfertheiner et al., 2005). To determine whether searching for *Helicobacter pylori* and treating with eradication therapy leads to a reduction in incidence of gastric cancer among healthy asymptomatic infected individuals. The search strategy identified 1560 citations, of which six individual randomised controlled trials were eligible. Fifty one (1.6%) gastric cancers occurred among 3294 individuals who received eradication therapy versus 76 (2.4%) in 3203 control subjects (relative risk 0.66, 95% confidence interval 0.46 to 0.95), with no heterogeneity between studies ( $I^2=0\%$ ,  $P=0.60$ ). If the benefit of eradication therapy was assumed to persist lifelong the number needed to treat was as low as 15 for Chinese men and as high as 245 for US women. These data provide limited, moderate quality evidence that searching for and eradicating *H. pylori* reduces the incidence of gastric cancer in healthy asymptomatic infected Asian individuals, but these data cannot necessarily be extrapolated to other populations (Ford, Forman, Hunt, Yuan, & Moayyedi, 2014). Systematic review included 25 RCTs with a total of 5555 patients with FD. Twenty-three of these studies were used to evaluate the benefits of *H. pylori* eradication therapy for symptom improvement; the pooled RR was 1.23 (95%CI: 1.12-1.36,  $P < 0.0001$ ). *H. pylori* eradication therapy demonstrated symptom improvement during long-term follow-up at  $\geq 1$  year (RR = 1.24; 95%CI: 1.12-1.37,  $P < 0.0001$ ) but not during short-term follow-up at  $< 1$  year (RR = 1.26; 95%CI: 0.83-1.92,  $P = 0.27$ ). Seven studies showed no benefit of *H. pylori* eradication therapy on quality of life with an SMD of -0.01 (95%CI: -0.11 to 0.08,  $P = 0.80$ ). Six studies demonstrated that *H. pylori* eradication therapy reduced the development of peptic ulcer disease compared to no eradication therapy (RR = 0.35; 95%CI: 0.18-0.68,  $P = 0.002$ ). Eight studies showed that *H. pylori* eradication therapy increased the likelihood of treatment-related side effects compared to no eradication therapy

(RR = 2.02; 95%CI: 1.12-3.65,  $P = 0.02$ ). Ten studies demonstrated that patients who received *H. pylori* eradication therapy were more likely to obtain histologic resolution of chronic gastritis compared to those who did not receive eradication therapy (RR = 7.13; 95%CI: 3.68-13.81,  $P < 0.00001$ ). The decision to eradicate *H. pylori* in patients with functional dyspepsia requires individual assessment (Du et al., 2016).

If a cost-effectiveness or cost-utility analysis is carried out there are four possible categories of results (Figure 2).

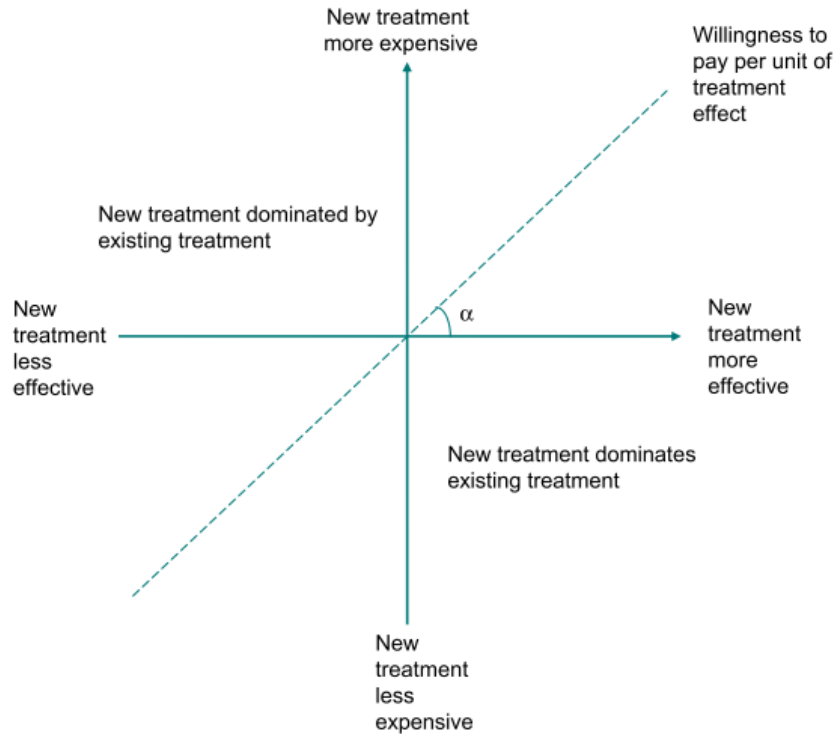


Figure 2: The cost-effectiveness plane. The angle ( $\alpha$ ) of the dotted line will vary according to the maximum willingness to pay for unit of effect. If the value falls below the dotted line then the new treatment should be adopted (Moayyedi, 2007)

If a new intervention is cheaper and more effective than the old treatment, then it is clear the new treatment should be adopted (the new treatment is said to 'dominate' the old therapy). Similarly, if a new intervention is more expensive and less effective than it is clear this should not be implemented (the new treatment is said to be 'dominated' by the old therapy). Usually, however, when a new health technology innovation is developed it results in better outcomes for patients but the manufacturing company will charge more than the traditional therapy. In this situation it will be unclear whether the new intervention is an efficient use of resources as this will depend on how much is willing to be paid for the health benefit (top right-hand corner of Figure 2). Rarely there is a new intervention which is less effective but less expensive than the old therapy and again it will be unclear whether the new intervention is an efficient use of resources (bottom left-hand corner of Figure 2). There are several diagnostic methods for *Helicobacter pylori* (*H. pylori*) infection. A cost-effective analysis is needed to decide on the optimal diagnostic method. If the prevalence of *H. pylori* in the patients with AG is 85% and CAM-resistant *H. pylori* is 30%, histology, stool *H. pylori* antigen (SHPAg), bacterial culture (BC), and urine *H. pylori* antibody (UHPAb) were dominated by serum *H. pylori* IgG antibody (SHPAb), rapid urease test (RUT), and urea breath test (UBT). Among three undominated methods, the incremental cost-effective ratios (ICER) of RUT versus SHPAb and UBT versus

RUT were \$214 and \$1914, respectively. If the prevalence of CAM-sensitive *H. pylori* was less than 55%, BC was not dominated, but its *H. pylori* eradication success rate was 0.86. Conclusions. RUT was the most cost-effective at the current prevalence of CAM-resistant *H. pylori*. BC could not be selected due to its poor effectiveness even if CAM-resistant *H. pylori* was more than 45% (Omata, Shimbo, Ohde, Deshpande, & Fukui, 2017). Previous international consensus statements provided general policies for the management of *Helicobacter pylori* infection. However, there are geographic differences in the prevalence and antimicrobial resistance of *H. pylori*, and in the availability of medications and endoscopy. Thus, nationwide or regional consensus statements are needed to improve control of *H. pylori* infection and gastric cancer (Sheu et al., 2017). The variety in costs per life-year gained between studies is mostly likely explained by differences in the population under investigation. The studies were performed in different countries with different gastric cancer risks, *H. pylori* prevalence, and costs of screening and eradication therapy. Screening was assumed to take place at a range of different ages in different studies. The assumptions on the screening test sensitivity and specificity, as well as the effectiveness of *H. pylori* eradication therapy were quite consistent between studies. Sensitivity of serology testing varied between studies from 85% to 98%, with a majority of studies using an estimate of 90%. Specificity varied between 79% and 97%, again with a majority of studies using a 90% estimate. *H. pylori* eradication efficacy varied between 80 and 92%. The resulting gastric cancer reduction from eradication therapy was clustered around 30% (in those studies reporting it), which is surprisingly consistent given the lack of evidence on the long-term benefits of *H. pylori* eradication therapy. Six studies reported findings for low *H. pylori* prevalence countries – the USA, UK, Canada and Finland. Prevalence of *H. pylori* infection was generally assumed to be 27–40% with Leivo et al (Leivo et al., 2004), in their study in Finland, assuming considerably lower prevalence (13%). Interestingly, two studies with the lowest assumed prevalence, were also the studies that found *H. pylori* screening might be cost-saving. However, both of these studies considered additional health care cost savings besides cost savings from gastric cancer prevention, such as costs savings of preventing peptic ulcers. The one additional study which considered other health outcomes, also reported a relatively low cost per life year gained of screening compared to no screening (GBP 5860). For the remaining studies costs per life-years gained ranged from \$10,000 to \$35,000. Even when comparing studies within one country cost-effectiveness estimates of *H. pylori* screening were quite different (Lansdorp-Vogelaar, 2013). Results were reported from five studies for six high-prevalence countries: Singapore, Thailand, China, Colombia, Japan and Taiwan. Three studies reported assumptions on *H. pylori* prevalence. Yeh et al assumed a prevalence rate of 70% for China, Harris et al assumed rates of 93% for Colombia and 73% for Japan, and Xie et al assumed a prevalence rate up to 43% for Chinese men in Singapore depending on age. Interestingly, this latter estimate is only slightly higher than the estimate for low-prevalence countries. The costs per life-year gained of *H. pylori* screening in high-prevalence countries varied from \$200 to \$17,000 per life-year gained. The study with the relatively low assumed prevalence was at the upper end of this range. One study directly compared cost-effectiveness of *H. pylori* screening in both low- and high-prevalence countries. The authors concluded that screening in countries where gastric cancer incidence is higher is more cost-effective than screening in the United States which has lower gastric cancer incidence. They considered population screening worth further consideration (Lansdorp-Vogelaar, 2013). In countries with high prevalence of *H. pylori*, it is possible that, instead of screening the population and selectively treating infected individuals, it might be more cost-effective to simply treat everyone. Parsonnet et al estimated that universal treatment would cost \$33,000 per life year gained compared to no screening, in a US population aged 50 in whom *H. pylori* prevalence was estimated to be 40%. Yeh et al evaluated cost-effectiveness of universal treatment for a region of China where *H. pylori* seroprevalence was assumed to be



70% among those aged 20. Compared to no screening, universal treatment was considered highly cost-effective among both men and women (ICERs of \$3250 per QALY gained for men and \$3060 per QALY gained for women). However, screening plus selective treatment (the most usual strategy) would also be considered highly cost-effective and, in fact, the ICERs for this option were lower (\$1560 per QALY gained for men; \$1500 per QALY gained for women), due to the higher cost of universal treatment. Age-groups from 20 to 50 were considered and, at all ages, universal treatment was less cost-effective compared to no screening or treatment than screening and selective treatment. Once-only screening for *H. pylori* with eradication therapy in those who test positive appears to be cost-effective in the asymptomatic general population. Based on limited evidence there do not appear to be benefits of re-treatment of those in whom treatment fails, repeated screening, targeting screening and treatment to those with the CagA phenotype, or universal treatment. These conclusions are against a background where most studies have failed to consider the other broader benefits that could accrue from screening and treatment, in terms of impacts on dyspepsia and/or ulcers, which would be expected to improve cost-effectiveness. However, most studies also failed to adequately address the potential negative effects of eradication therapy. In addition, whether studies have considered realistic estimates of the treatment effectiveness, success and compliance is debatable, given the lack of evidence for these parameters (Lansdorp-Vogelaar, 2013). Economic considerations are becoming increasingly important as health care becomes more expensive. Evidence for effectiveness is usually gained from randomised controlled trials (RCTs) but often there is insufficient evidence of the costs of alternative strategies in trials. Often, therefore, economic models are needed to extrapolate data from a variety of sources to give an indication of which strategy is cost effective. Helicobacter pylori (*H. pylori*) testing and treating in a wide variety of upper gastrointestinal diseases is a good example of the application of economic analyses to health care interventions. *H. pylori* eradication in peptic ulcer disease is very effective with systematic reviews giving a number needed to treat of around two compared to no therapy. RCTs have also suggested that treating *H. pylori* is also more effective and less expensive than continuous H<sub>2</sub> receptor antagonist therapy and is therefore the dominant strategy in treating peptic ulcer disease. The impact of *H. pylori* eradication in infected patients with functional dyspepsia is less dramatic, with systematic reviews suggesting a number needed to treat of 14. Economic models suggest that in Europe *H. pylori* eradication is cost-effective compared to offering no treatment (e.g. in the UK we can be 95% certain this approach is cost effective if you are willing to pay \$51/month free from dyspepsia). In the USA it is less certain that this is a cost-effective approach due to the higher cost of eradication therapy. *H. pylori* test and treat has been proposed as an alternative to early endoscopy in patients with uninvestigated dyspepsia. We have conducted an individual patient data meta-analysis of five RCTs that has addressed the cost effectiveness of this approach. Endoscopy was slightly more effective than *H. pylori* test and treat at relieving dyspepsia at one year but was not cost-effective as it cost \$9000/dyspepsia cure at one year. Population *H. pylori* test and treat has been proposed as a strategy to prevent noncardia gastric cancer. RCTs have suggested this approach may be cost saving but more data are needed on whether *H. pylori* eradication will reduce gastric cancer mortality before this strategy can be recommended (Moayyedi, 2007).

### 3. CONCLUSIONS

Cancer constitutes an enormous burden on society in more and less economically developed countries alike. The occurrence of cancer is increasing because of the growth and aging of the population, as well as an increasing prevalence of established risk factors such as smoking, overweight, physical inactivity, and changing reproductive patterns associated with urbanization and economic development. Based on GLOBOCAN estimates, about 14.1 million new cancer cases and 8.2 million deaths occurred in 2012 worldwide. Despite a worldwide

decline in incidence, gastric cancer remains a major health concern. It ranks as the fourth most common cancer and the second most frequent cause of death from cancer, accounting for 10.4% of cancer deaths worldwide. Each year, approximately 900 000 people are diagnosed with the disease and around 700 000 people die from it. *Helicobacter pylori* is recognized as one of the most significant risk factors for gastric cancer, and *H. pylori* eradication has been proposed as a possible primary chemo-preventive strategy to reduce gastric cancer incidence. A meta-analysis of seven randomized controlled trials concluded that *H. Pylori* eradication reduces gastric cancer incidence by 35%.

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## STUDENT PERCEPTION VERSUS EMPLOYERS EXPECTATION OF ACCOUNTING SKILLS AND KNOWLEDGE AFTER GRADUATION

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### **ABSTRACT**

*The period after world financial crisis and environment with high unemployment rate and high rate of emigration lead to impose the question about investigation of student perception about the obtained knowledge during academic studies and the expectation of the employers about the knowledge and skills of the possible future employees. The aim of the research is to explore the gap between student perception and employer expectation in order to improve the universities studies in accounting education. The research is conducted at the state university which is the best ranked at the country on undergraduate students on accounting and auditing department. The expectation of the employers is measured through survey where the target are managerial position, chief executive officers and chief financial officers. Since the university is in the process of improving and accrediting studies programs, the results from the research would be also used in that process.*

**Keywords:** *accounting education, student perception, employers expectation, skills, accounting knowledge*

### **1. INTRODUCTION**

The context and increased changes of the business environment globally, has resulted in changes in the skills and knowledge required by accounting graduates as well as employers in order to produce useful information for them. The accounting profession worldwide become even more important after world financial crises with strict accounting regulation on one hand and increased requirements about accounting quality from employers from the other side. In most of the European countries, International Financial Reporting Standards/International Accounting Standards (IFRS/IAS) are adopted and there is international recognition of accounting profession due to its globalization and more or less same regulation. Besides wide usage of IFRS/IAS, International Education Standards are not with the same popularity having in mind that are not translated and officially adopted in many countries. However, students on accounting departments are offered undergraduate and postgraduate studies in accounting as well as professional studies in accounting which they choose to study after graduation.

On the other side, many changes occur within years and decades, globalization and information technology put significant stamp and, therefore, the requirements in the accounting profession have changed significantly. Globalization of the world economy impose globalization on accounting profession too, and the revolution in information technology change the course of

the accounting profession. Information generated with accounting information systems are faster exactly as the requirements for them and also very cheap due to the process of automation. All these changes contribute to changed requirements of employers for the future practitioners of accounting profession. Aspiring accountants are faced with challenge to possess wide spectrum of skills and knowledge, not only accounting knowledge and simple accounting evidence and reporting. This means that expectations of performance placed on accounting graduates are complex and demanding requiring them to develop broader skills and knowledge as well as continual professional development (Howieson, 2003). Therefore, universities, and especially, departments of accounting are faced with the challenge of developing different skills and including versatile knowledge as well as more practical studies and problem-solving studies. The aim of such broaden area of accounting skills and knowledge is to decrease the gap between student preparedness for their professional career and employer expectation for hiring students in accounting. Accounting graduates should gain knowledge and skills that are well beyond technical knowledge and should be well prepared for life-long learners, global citizens, agents for social good and for personal development in light of an unknown future (Barrie, 2004; Kavanagh & Drennan, 2008). Many countries passed or are in the process of revising universities' curricula in order to be in pace with contemporary business environment and to decrease the expectation gap relating employers demands (Hassel, 2005) (Albrecht & Sack, 2000) (Braun, 2004). Accounting professors worldwide are faced with continual curriculum improvements in order to produce accounting graduates with broader set of skills and knowledge encompassing more than purely technical accounting expertise (Braun, 2004). Some universities, especially from the emerging countries are faced with national regulation requiring high percentage of curricula compliance with the best ranked universities. In this research the skills and knowledge desirable to possess accounting graduates are divided into two broad groups – technical and generic that are considered as important for professional career in accounting, how much they are important according to students, how much they are developed and supported within university curriculum and what are employers expectations about skills and knowledge that accounting graduates should possess in order to be hired.

## **2. GROUPS OF SKILLS AND KNOWLEDGE**

Doing research about required skills and knowledge in accounting profession imposed many questions what to include in them and how to group all required skills. Most of the papers published in this area divided skills and knowledge into technical – professional, accounting skills and knowledge and generic skills and knowledge that comes from each personality and might be or might not be developed within accounting curricula (DeLange, et al., 2006) (Jackling & Lange, 2009) (Kavanagh & Drennan, 2008). There are authors that investigate necessary skills divided into five groups – personal, interpersonal, intellectual, professional and generic (Wells, et al., 2009). As in the most studies many of the personal, interpersonal and intellectual skills are joined into generic and professional skills. Usually, generic skills are broad and are associated with those skills developed outside of the 'technical curriculum' and include general skills such as oral and written communication (Jackling & Lange, 2009). Nowadays there is an authors that expand the scope of generic skills to emphasize relevance to graduate outcomes in terms of the business world and employability (Barrie, 2004). There are authors (Villiers, 2010) (Weber, et al., 2009) who distinguish between hard (technical) and soft (generic) skills. They defined soft skills as "interpersonal, human, people or behavioral skills needed to apply technical skills and knowledge in the workplace". This definition might be logical explanation why employers according to many studies mentioned below in the text, give more priority and bigger significance to the generic skills. According to all previously mentioned about generic or soft skills, and while technical skills are recognized as technical accounting skills and knowledge all over the world, non-technical skills have different names

in different countries (Hancock, et al., 2009). Most used terms in the biggest developed countries are generic skills (Australia), employability skills (Canada), key qualifications (Germany), trans-disciplinary skills (Switzerland), core, key, common or personal skills (UK) and basic, necessary, transferable or fundamental skills (USA). International Education Standards are developed in direction of reinforcement of the entry requirements that would include a proper education background, advanced level of both technical competences and interpersonal/communication skills as well as a very strong ethical commitment. International Education Standards are issued by International Accounting Education Standards Board (IAESB) which is one of the several independent standard setting boards operating under the International Federation of Accountants (IFAC) umbrella. According to IAESB, enhancing education through developing and implementing IESs should increase competence of the global accounting profession and contribute to strengthened public trust. Furthermore, competence is developed and sustained through initial education and practical experience, followed by continual professional education, postulates comprises into IESs. In line with these research could be connected IES too. IES 2 – Initial Professional Development: Technical competence comprises technical skills and knowledge, while IES 3 – Initial Professional Development: Professional Skills and IES 4 – Initial Professional Development – Professional Values, Ethics and Attitudes comprises generic skills. It could be concluded that although research questionnaire is not designed directly as IES classification of skills and knowledge, it comprises in general skills and knowledge that are defined by IES.

### **3. LITERATURE REVIEW AND DEVELOPMENT OF RESEARCH QUESTIONS**

As accounting as a profession gain to its popularity and necessity, many research studies appear with analyzing knowledge that accounting graduates should possess in order to start its professional career (Kavanagh & Drennan, 2008) (Jackling & Lange, 2009), since there is concern that accounting graduates lack the skills required for professional practice (Oliver, et al., 2011). Although technical accounting knowledge is unquestionable, there are other generic skills and knowledge that should be more developed and are with increased significance for accounting career (DeLange, et al., 2006) (Albrecht & Sack, 2000) in comparison with only decade ago. Many researchers argue that both technical and generic skills are required to produce accounting graduates ready for complex business challenges in the modern business environment (Howieson, 2003). Besides generic or “personal” characteristics, accounting studies should be interdisciplinary studies especially with management (Elliott & Jacobson, 2002) and finance. Different research investigate students’ perception for the skills that are important for employment according to their understanding (Gabric & McFadden, 2000) (Kavanagh & Drennan, 2008) and generally the findings are that generic and personal skills are very important to make them more competitive for employment. Specifically, students give priority of technical skills and knowledge, especially continuous learning as the most important skill to future career (Kavanagh & Drennan, 2008). But on the other hand, students also argue that the skills that they considered as very important to make them competitive employee to be are not well developed within university studies (Athiyaman, 2001) (Kavanagh & Drennan, 2008). Examining perceptions of importance, demonstration and delivery of skills revealed that the greatest discrepancies for graduates were in relation to Solving complex, real-world problems, Work-related knowledge and skills, Speaking clearly and effectively, Working effectively with others and Developing a personal code of values and ethics (Oliver, et al., 2011), gaps that are the most common among students. All these research are realized in well developed economies with developed and efficient employment market, but the situation in emerging countries with high unemployment rate and inefficient employment market could be drastically different.

Moreover, the period when university is faced with mandatory requirement to enhance its curricula in order to be 80% consistent with the best ranked universities, the question about which skills and knowledge are perceived as important by the students has imposed as necessary. On the other hand, from immense importance is to know how much these skills and knowledge is developed within existing curricula in order key areas or biggest gaps to be detected and improved in the new curriculum. Therefore, the first two research questions are:

RQ 1: What diversified knowledge do graduating accounting students perceive as useful for career success in accounting?

RQ 2: To what extent do graduating accounting students perceive that these professional skills have been developed as part of their degree programs?

In Macedonia and other emerging countries are not undertaken research about employers' preferences about students' skills and knowledge but there are several studies from developed countries which were base for this research. General conclusion in these studies is that accounting graduates besides technical accounting knowledge should have generic knowledge and skills such as oral and written communication, team-working, critical thinking, decision making (Albrecht & Sack, 2000) (DeLange, et al., 2006) (Hassel, 2005). This means that employers often give priority to generic skills instead of technical (Jackling & Lange, 2009). In other studies, employers are expecting graduates entering the profession to have as the top three skills problem solving skills, business awareness and basic accounting skills (Kavanagh & Drennan, 2008). Cory and Pruske (2012) in their research on accounting related skills, although they have not divided skills into technical and generic, but divided respondents into public and non-public accountants, final results are that generic skills are highly rated as most important for entry level accountants – excel, word, problem solving, windows, ethical issues, internet, PowerPoint, and access. This employers' perception is significantly different from students' perception about the most necessary skills and knowledge in order to enter the accounting profession (Kim, et al., 1993) (Gati, 1998). Since the universities put more emphasis to technical knowledge in their curricula, employers' claim that future employees do not possess necessary skills to answer on modern business environment (Gammie, et al., 2002) (Hutchinson, 2003) (Mohamed & Lashine, 2003) (Hassel, et al., 2005). These led to third research question to be analyzed in Macedonia:

RQ 3: Which skills do employers expect accounting graduates to possess?

RQ 4: What is the difference between student perceptions and employer expectations in terms of the professional skills that are important for career in accounting?

Despite the efforts at universities to develop both technical and generic skills, some authors have argued that it is unrealistic for universities to assert that accounting graduates will possess the necessary generic skills to meet the demands of employers (Clanchy & Ballard, 1995) (Lucas, et al., 2004) (Cranmer, 2006) and universities only give opportunities to students to learn and develop generic skills during the studies (Clanchy & Ballard, 1995), but final outcome is up to the students. In this direction, especially in the recent years, lot of universities mandatory require practical internship from students every academic year in order to face the students with real working requirements in order to be aware which skills are required to develop during their studies. Employers must understand, as students do, that learning is a continuous process and many of the higher order skills that they expect can only be developed with guidance 'on the job' (Kavanagh & Drennan, 2008). On the side of universities, they should be aware that there is need greater emphasis to be on generic skills as preparation for employment in accounting since many undergraduate curricula fail to provide general education together with a specialized professional education to meet the needs of employers (Jackling & Lange, 2009). Future business professionals, especially so-called "gold collar workers" need to

have both technical and generic skills, for the sake of effectiveness, efficiency and continued growth and performance (Villiers, 2010). According to Villiers, generic skills can be taught and learnt, although it is not easy task, but at the end it would be worth the effort. One of the skills that is extremely important for accounting career, but is not prioritized is knowledge of information technology. The issue of developing IT skills in accounting education has been red alert all over the world and mostly from professional organizations such as AAA and IFAC (AAA, 1986) (IFAC, 2003) (IFAC, 2007). Although now is a computer era, knowing of accounting information systems still is not strong characteristic of accountants especially accountants that are long period into profession. Regarding accounting graduates, situation is similar since on many top rated universities accounting information systems is not mandatory course (Ahmed, 2003) (Chang & Hwang, 2003) (Lin, et al., 2005), but nowadays graduates have bigger potential for fast learning of information systems after graduation. The greatest gap between expectation and delivery according to Kavanagh and Drennan (2008) is recorded just in accounting software skills. Senik & Broad (2011) in their qualitative research analyzed the barriers for poor IT skills of accounting graduates identifying three major barriers: (1) academic staff – lack of interest to changing teaching methods, which IT packages to use as well as age profile of the professors, i.e. soon-to-retire academic staff is usually indifferent to integration of IT in accounting curriculum; (2) environment – type of university (traditional and research oriented usual do not have time for IT integration in their curriculum), syllabus constraints and costs and (3) students – low participation of students in IT-based activities and students under presumption that already have IT knowledge do not choose IT courses in their studies unless they are mandatory. These barriers should be taken into consideration in order to increase the rate of using effectively IT into accounting curriculum as IT skills according to many authors are essential for accounting graduates (Welch, et al., 2010). The importance of IT knowledge could be seen from Cory and Pruske (2012) research where 6 of top rated accounting related skills are IT related skills. Finally, European Accounting Association suggests that new IESs should address data analytic skills as well as IT and computer skills as skills of utmost importance for accounting profession (Cameran & Campa, 2016).

#### **4. METHODS**

In this research are used students and employers in order to assess their perception and to define expectation gap if it exists. Students from biggest and best ranked university and practitioners from 30 entities are contacted to collect data. Both quantitative and qualitative methods are employed to collect data. The base for designing questionnaire were the surveys from Kavanagh and Drennan (2008) and Jackling and Lange (2009) which were adopted and improved.

A qualitative studies was conducted on selective employers through semi-structured interviewss in order to get better understanding of their expectations.

The research questions are developed and further investigate:

RQ 1: What diversified knowledge do graduating accounting students perceive as useful for career success in accounting?

RQ 2: To what extent do graduating accounting students perceive that these professional skills have been developed as part of their degree programs?

RQ 3: What Professional skills do employers expect accounting graduates to possess?

RQ 4: What is the difference between student perceptions and employer expectations in terms of the professional skills that are important for career in accounting?

RQ 5: Do the graduating accounting students give priority to academic or professional studies after graduation?

The questionnaires are analyzed in SPSS software.



## 5. FINDINGS

The students' skills were divided into technical and generic skills. Total skills offered for evaluation on scale from 1 (less important) to 5 (most important) were 50. Furthermore, the students were asked to rank the same skills as to its perceived importance and its inclusion in the current program they are studying. The interesting finding is that students agree that in the current curriculum technical skills are of great importance and their perception is also that they are of great importance but students think some of the key generic skills are important but not enough included in the current accounting education such as team work, written and verbal communication, self-motivation. After processing the data some key findings came to the surface. In relation to RQ1 about diversity knowledge the students expect to gain during their formal university education, most of them think that all listed knowledge areas is of moderate or greater importance (Table 1). They answered that information technology, management, mathematics and finance as disciplines with great importance while marketing, statistics, and economics as disciplines with moderate importance. Unlike the findings for research question 1, the student perception for the RQ2, i.e. their perception how much listed knowledge and skills are developed at university have answered that most of the disciplines are moderate developed, and some are even low developed (Table 1). It can be concluded that disciplines related to technical skills related with computers are not well developed as well as most of the generic skills. It is result of non-usage of accounting software at the faculty and expectation of students that should be learnt to become technical accountants, area that is more subject to secondary schools. Since generic skills are not part of the regular undergraduate curricula, it might be useful for students more seminars and workshops for strengthening generic skills to be organized within the faculties. Adversely to the student perception that they should be perfectly "equipped" with technical accounting knowledge, employers expectations are focused on generic skills, most of them inherent into student personality or developed throughout the social life or informal education (RQ3). These can be concluded from Table 1 and Table 2 where can be noticed that employees put greater importance of such generic skills or personal qualifications. In comparison of student perceptions and employer expectations general conclusion is that students put greater importance of technical skills as key factors for their initial employment while employers put greater importance on generic skills such as team work, interpersonal relations, interdisciplinary knowledge and ethics and professionalism. For both groups it is common to appreciate and evaluate with great importance the knowledge of information technologies which is highly ranked by both groups (Table 2). In order to reduce complexity in drawing conclusions, factor analysis for dimension reduction is used. Principle Component Analysis with Varimax with Kaiser Normalization rotation method is performed (Table 3) where from 50 variables 10 components emerged which collectively explains 66,631% of the variance among the items. Commonalities for all items in each component are greater than .51 indicating that each contributed to the component analysis. Of interest is the perception by students that technical knowledge but also leadership are skills necessary for their future careers. According to further educational development after graduation, students are almost equally divided in favor of both academic degree (postgraduate studies) and professional certification (3,32 and 3,83 for academic and professional studies respectively), but employers are well differentiated in giving greater importance of professional certification (mean 2,74 and 4,57 for academic and professional studies respectively). For the most popular professional certification the students pick out ACCA and CIA. The results indicate that there is a room or improvement at university studies related with application of learning to real business situations or professional practice. This is proven also in other studies (Wells, et al., 2009) and as a possible solution to this problem or possible improvement is including case studies during the lectures as well as practical experience as a mandatory part of the accounting courses.

## 6. CONCLUSION

The accounting profession besides it come to increased scrutiny after financial crises, its popularity among students also has been increased due to the increased quality requirements within the profession and increased employment possibilities. Years ago only the best students are enrolling at accounting and auditing standards, and what is more important students from the start are aware that most of all they have to be critical thinking, problem solving and number oriented. Students ranked almost all skills from moderate importance to great importance but their opinion is that the excellent technical skills and accounting knowledge will lead them to successful career. Unlike this student's perception employees are more focused on generic skills in making decision for hiring. As addition to attaching greater importance on technical skills, students after graduation are more interested to obtain professional certification instead of academic degree. This student attitude leads to smaller number of students with accounting background enrolling postgraduate studies in accounting, but students with different background, especially finance, becoming more interested in accounting academic degree in order to increase their employment opportunities.

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## APPENDIX

Table 1. Means Differences Between Student Perception and Employers Expectation

	Skills and knowledge	Student Perception		Developed		Student perception vs. developed skills		Employers perception		Student vs. Employer Perception		
		Mean	Std. Dev.	Mean	Std. Dev.	Mean Difference	Sig.	Mean	Std. Deviation	Mean Difference	Sig	
	<b>Technical skills</b>											
1	Accounting software	4,59	,723	2,17	1,393	2,418	,000	3,51	1,147	1,076	,000	***
2	IT	4,65	,585	2,45	1,347	2,193	,000	4,80	,406	-,154	,071	*
3	Accounting evidence	4,80	,436	2,98	1,310	1,820	,000	4,20	,933	,599	,001	***
4	Key accounting principles, methods and technics	4,61	,740	3,71	1,080	,906	,000	4,46	,701	,154	,254	
5	Ethics	4,31	,823	3,42	1,083	,888	,000	4,77	,598	-,459	,000	***
6	Quantitative analysis	4,24	,795	3,39	1,177	,855	,000	4,20	,797	,043	,775	
7	Financial Statement Analysis	4,60	,741	3,75	1,091	,856	,000	4,37	,808	,233	,127	
8	Accounting Information Systems	4,20	,897	3,27	1,213	,935	,000	3,77	,942	,430	,018	**
9	Audit process	4,30	,893	3,34	1,288	,960	,000	3,49	1,067	,813	,000	***
10	Internal audit	4,32	,858	3,35	1,284	,974	,000	3,29	1,100	1,034	,000	***
11	IFRS	4,45	,801	3,47	1,119	,977	,000	3,89	,963	,566	,002	***
12	Cost analysis	4,45	,835	3,80	1,071	,653	,000	4,09	,919	,366	,037	**
13	Pricing	4,21	,892	3,68	1,150	,532	,000	3,66	,906	,551	,002	***
14	Company's analysis	4,32	,825	3,56	1,091	,758	,000	3,94	,906	,377	,029	**

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15	Accounting based decision making	4,49	,828	3,51	1,017	,975	,000	4,06	,873	,429	,011	**
16	Perofrmance Measurement	4,54	,728	3,55	1,078	,995	,000	4,14	,733	,399	,006	***
17	Budgeting	4,40	,814	3,24	1,101	1,165	,000	3,86	1,004	,546	,005	***
18	Foreign language	4,25	,815	3,38	1,359	,869	,000	4,57	,655	-,321	,016	**
	<b>Generic skills</b>											
19	Goal for professional development	4,40	,769	3,19	1,165	1,216	,000	4,43	,778	-,026	,861	
20	Interaction of accounting with other disciplines	3,94	,887	3,32	1,137	,614	,000	4,29	,710	-,348	,016	**
21	Self promotion	4,19	,975	2,71	1,343	1,482	,000	4,09	,951	,102	,574	
22	Negotiation	3,94	,977	2,60	1,289	1,340	,000	3,89	1,022	,052	,787	
23	Lidership	4,08	,957	2,96	1,265	1,119	,000	3,71	1,045	,369	,063	*
24	Company promotion	4,03	1,013	2,78	1,284	1,251	,000	3,86	,974	,178	,342	
25	Interpesonal	4,18	,816	3,10	1,144	1,080	,000	4,40	,651	-,219	,095	*
26	Sef motivation	4,42	,882	3,17	1,259	1,257	,000	4,43	,655	-,005	,970	
27	Professional attitude	4,61	,691	3,24	1,250	1,367	,000	4,57	,558	,040	,721	
28	Oral Communication	4,22	,862	2,91	1,354	1,302	,000	4,51	,562	-,299	,014	**
29	Written communication	4,26	,867	3,37	1,331	,883	,000	4,46	,741	-,200	,172	
30	Creativity	3,78	1,172	2,86	1,292	,921	,000	3,80	,964	-,015	,936	
31	Self confidence	4,47	,869	3,24	1,256	1,228	,000	4,40	,695	,072	,602	
32	Flexibility	4,34	,886	3,25	1,215	1,087	,000	4,43	,778	-,088	,561	
33	Listening	4,26	,851	3,70	1,127	,559	,000	4,53	,825	-,272	,091	*
34	Interethnical culture	4,11	1,078	3,67	1,224	,442	,001	3,91	,981	,197	,301	
35	Interdisciplinarity	4,16	,799	3,54	1,131	,620	,000	4,17	,785	-,012	,937	
36	Continual education	4,62	,658	3,78	1,167	,841	,000	4,77	,426	-,153	,094	*
37	Independent though	4,44	,817	3,71	1,151	,732	,000	4,51	,658	-,077	,558	
38	Tenacity	4,45	,756	3,59	1,212	,857	,000	4,63	,731	-,177	,207	
39	Risk aversion	3,85	,992	3,07	1,202	,775	,000	3,31	,932	,533	,004	***
40	Problem solving	4,52	,729	3,42	1,148	1,096	,000	4,29	,667	,235	,072	*
41	Critical thinking	4,14	,874	3,36	1,186	,779	,000	4,20	,719	-,061	,668	
42	Teamwork	4,33	,861	3,51	1,247	,823	,000	4,60	,695	-,267	,057	*
43	Logical arguing	4,43	,850	3,48	1,287	,949	,000	4,54	,561	-,112	,345	

*Table 2. Rang of the first ten skills according by students and employees*

Skills and knowledge	Rang		S	E	Means difference	Significance
	S	E	Mean	Mean		
Accounting evidence	1	22	4,80	4,20	,599	,001
IT	2	1	4,65	4,80	-,154	,071
Continual education	3	3	4,62	4,77	-,153	,094
Key accounting principles, methods and technics	4	12	4,61	4,46	,154	,254
Professional attitude	5	7	4,61	4,57	,040	,721
Financial Statement Analysis	6	19	4,60	4,37	,233	,127
Accounting software	7	40	4,59	3,51	1,076	,000

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Perfrmance Measurement	<b>8</b>	26	4,54	4,14	,399	,006
Problem solving	<b>9</b>	21	4,52	4,29	,235	,072
Accounting based decision making	<b>10</b>	29	4,49	4,06	,429	,011
Tenacity	14	<b>4</b>	4,45	4,63	-,177	,207
Logical arguing	16	<b>8</b>	4,43	4,54	-,112	,345
Teamwork	21	<b>5</b>	4,33	4,60	-,267	,057
Ethics	24	<b>2</b>	4,31	4,77	-,459	,000
Listening	27	<b>9</b>	4,26	4,53	-,272	,091
Foreign language	28	<b>6</b>	4,25	4,57	-,321	,016
Oral Communication	30	<b>10</b>	4,22	4,51	-,299	,014

Table 3. Essential Skills for professional carrier according to student perception

Factor names		Component									
		1	2	3	4	5	6	7	8	9	10
Technical accounting knowledge <i>Cronbach alpha = 0,876</i>	Audit process and technics	,757	,068	,058	,080	-,187	-,104	,298	-,029	-,043	,200
	Financial Statement Analysis	,738	-,070	,205	,109	,074	-,057	-,029	-,135	,222	,084
	Cost analysis	,710	,138	,044	,064	,107	,318	-,181	,160	,044	-,011
	Internal audit process	,667	,179	,151	,116	,091	,065	,095	,319	-,061	,028
	Pricing	,583	,345	-,040	-,059	,050	,396	-,079	-,007	-,030	-,036
	Accounting Information Systems	,581	,089	,252	,127	-,117	,101	,086	,314	,328	-,090
	Accounting based decision making	,558	-,067	,079	,198	,243	,452	,005	-,028	,190	-,132
	Key accounting principles, methods and technics	,531	-,061	,018	,059	,219	,185	-,043	,260	,412	,218
Personal <i>Cronbach alpha = 0,888</i>	IFRS	,530	,119	,046	,123	,151	,031	,100	,293	,167	,197
	Flexibility	,148	,688	,016	,307	,151	-,119	,012	,056	,081	,142
	Listening	,055	,661	,138	,290	,159	,170	-,043	,242	-,050	,179
	Creativity	,011	,655	,294	-,053	,033	,190	,212	-,182	,049	,122
	Self confidence	,229	,632	,312	,139	,234	-,132	-,111	,078	,088	,258
	Cross etnical culture	,024	,620	,132	,330	,130	,120	,073	,229	,092	-,036
Leadership and promotional <i>Cronbach alpha = 0,852</i>	Risk aversion	,208	,534	,151	-,163	,212	,099	,325	-,168	-,050	,132
	Negotiation	,175	,031	,796	,096	,042	-,068	,038	,016	,036	-,006
	Lidership	,066	,163	,745	-,137	-,005	,156	,102	,062	-,045	,296
	Self Promotion	,145	,058	,644	,277	,254	,089	-,011	,092	,081	-,188
	Company promotion	,129	,310	,641	,029	-,065	,389	,118	-,059	-,001	,138
	Interpersonal	,129	,367	,575	,070	,295	,055	,181	,140	,061	,026
	Oral communication	-,055	,452	,526	,192	,050	,061	,201	-,067	,112	-,202
Professional <i>Cronbach alpha = 0,802</i>	Self motivation	,177	,243	,507	,454	,099	,103	-,011	,249	,043	,197
	Continual learning	,221	,106	-,131	,702	,058	,141	,200	,109	,002	,141
	Written communication	,199	,262	,303	,650	,228	,075	,120	-,154	,143	-,070
	Interdisciplinarity	,027	,447	,225	,630	,026	,122	,163	,181	,077	,124
	Proffesional attitude	,139	,064	,290	,550	,325	,086	,140	,164	,067	,153
	Logical arguing	,132	,229	,027	,301	,690	-,033	,196	,131	,083	,141
	Critical thinking	,022	,265	,191	,157	,652	,164	,157	,049	-,019	,193

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Logical <i>Cronbach alpha = 0,747</i>	Teamwork	,116	,481	,168	,039	<b>,562</b>	,021	,193	,078	,005	-,209
Management Accounting Cronbach alpha = 0,687	Budgeting	,133	,096	,119	,037	-,007	<b>,722</b>	,068	,227	,064	,115
	Performance measurement	,239	,047	,157	,279	,113	<b>,706</b>	,074	-,063	,205	,005
Appreciative Cronbach alpha = 0,675	Foreign Language	-,113	,113	,096	,119	,216	-,112	<b>,708</b>	,163	,065	,070
	Goal for professional development	,007	,008	,122	,367	,155	,348	<b>,601</b>	,186	,009	,062
	Interaction of accounting with other disciplines	,294	,174	,165	,265	,152	,134	<b>,586</b>	-,079	,023	,024
Ethics and analytical Cronbach alpha = 0,640	Ethics	,212	,027	,118	,256	,129	,050	,082	<b>,732</b>	,114	,066
	Quantitative analysis	,273	,311	,055	-,012	-,032	,243	,328	<b>,538</b>	,257	-,149
Financial Accounting and IT Cronbach alpha = 0,536	Accounting software	,134	,020	,052	,130	,070	,062	-,119	,093	<b>,727</b>	-,166
	IT	,040	,219	,057	,046	-,140	,071	,284	-,045	<b>,704</b>	,089
	Accounting evidence	,170	-,091	-,035	-,163	,209	,130	-,004	,362	<b>,534</b>	,237
Independent and Tenacity Cronbach alpha = 0,718	Independent though	,106	,253	,111	,216	,081	,088	,077	,006	,039	<b>,762</b>
	Tenacity	,191	,293	,025	,479	,267	,004	,170	,125	-,093	<b>,517</b>

*Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.*

## LIMITED LIABILITY OF INSURERS FOR DAMAGES BASED ON MOTOR THIRD PARTY LIABILITY INSURANCE

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### **ABSTRACT**

*In this paper the author is addressing the problem of limited liability of insurers for damages based on motor third party liability insurance. Analysing the question of non-contractual liability of owners of motor vehicles for damages caused by a motor vehicle in operation and concluding motor third party liability insurance contracts, the author analyses the current solutions in Directive 2009/103/EC relating to insurance against civil liability in respect of the use of motor vehicles and relative solutions in Croatian legislature. The author pays particular attention to the institute of minimum amounts covered by insurance for motor third party liability insurance which guarantees insurers cover for insured minimal amounts also limiting the insurers obligation. This paper also discusses the settled Croatian case law in legal questions regarding the combination of insured limits for motor third party liability insurance and placing the injured party in an unequal legal position in cases of the insurers limited liability when the injured party suffered damages as a result of an accident in which two or more motor vehicles of the same or different insurers participated. Examining the various aspects of insurance providing protection to injured parties and the insurer the author points out the need for amendments of Croatian legislation.*

**Keywords:** *motor third party liability insurance, limited liability, case-law*

### **1. INTRODUCTION**

Modern road transport in 1898 consisted of 1 000 vehicles (Ćurković, 2004, p.150). Today's data significantly differs. In 2015 around 947 million passenger cars and 335 million commercial vehicles were in operation worldwide (Number of vehicles in use worldwide 2006-2015, 2017, p.1) and there are projections that number of cars will reach 2 billion by 2040 (Nitch Smith, 2016, p.1). In the Republic of Croatia in 2016 there was 1 552 904 registered passenger cars (Registered road vehicles and road traffic accidents, 2016, p.1), there were 1 948 004 issued insurance policies (Insurance market in Croatia, 2016, p.1) and there were 10 779 road traffic accidents with casualties (Registered road vehicles and road traffic accidents, 2016, p.1). As a result of the constant increase in motor vehicles, and with that a direct increase in the probability of accidents – it was essential to form and make compulsive insurance of the owner or user of the vehicle against liability for damages caused to third parties. From the standpoint of liability for damage, vehicle accidents are the most common forms of wrongful acts with consequences to life, health and assets (Crnić, 2004. p.41). Motor third party liability insurance (MTPL insurance) has a purpose to provide protection to injured parties of accidents when damages were a result of the operation of motor vehicles. Compulsory MTPL insurance is a type of asset insurance with a compensation for damage character encompassing all people which on contract or non-contractual grounds suffer damages as a result of the operation of motor vehicles (Radionov Radenković, 2008, p.408).

### **2. CIVIL LIABILITY IN RESPECT OF THE USE OF VEHICLES AND MTPL INSURANCE**

Insurance against civil liability in respect of the use of motor vehicles (MTPL insurance) is based on the presumption of liability and represents asset (of damages) insurance which prevents the loss of a person's assets which would occur in cases of non-contractual liability for



damages (Matijević, 2007, p.149). Croatian legislation regulates the question of civil liability for damages caused by a motor vehicle in operation in Articles 1068-1072 of the Civil Obligations Act of the Republic of Croatia (hereinafter: ZOO). Defining a motor vehicle as a self-propelled vehicle designed for running on land, either on rails or not (Article 1068(1) ZOO), it also prescribed that liability for damages to third parties (pedestrians) in relation with the operation of the motor vehicle – the owner of a motor vehicle shall be liable for damages based on absolute liability. For damages to third parties (pedestrians) the law does not exclude the right to redress for material damage in the case of death, physical injury or health impairment (Crnić, 2008, p.125). European legal standard prescribes the obligation that EU Member States shall take all appropriate measures to ensure that civil liability in respect of the use of vehicles is covered by insurance. Solutions to this subject matter is prescribed in Article 5 Directive 2009/103/EC of the European Parliament and of the Council of 16 September 2009 relating to insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability (Directive 2009/103/EC) in respect of the use of vehicles normally based in the territories of EU Member States. In all Member States, MTPL insurance is mandatory for all users of motor vehicles (Tomeski, 2012, p.201). It is important to observe that a vehicle means any motor vehicle intended for travel on land and propelled by mechanical power, but not running on rails, and any trailer, whether or not coupled (Article 1(1) Directive 2009/103/EC). The Croatian legal system implemented solutions found in Directive 2009/103/EC in Act on Amendments and Supplements to the Act on Compulsory Traffic Insurance from 2013. Article 22(1) Act on Compulsory Traffic Insurance from 2005 (hereinafter: ZOOP) prescribes that the owner of the vehicle shall be obliged to conclude an insurance contract against liability for damage which the use of a vehicle may cause to third parties in the form of death, bodily injury, impairment of health, destruction or damage to property. Considering that protection of third parties (improving their legal status) was the reason for implementing ZOOP it is of importance to observe that the Croatian insurance system (based on the solutions in Directive 2009/103/EC) does not contain definition of a third party, it defines an "injured party" as each person who has suffered damage to property or bodily injury and who is entitled under this Act to make a claim for compensation (Article 3(1.8) ZOOP). The injured party may lodge a claim for compensation of damages to the responsible person or a direct claim to the liable insurer (lat. *actio directa*). Even though there is a general rule that the injured party is not entitled to lodge a direct claim for compensation of damages from the liable insurer as he is not with them in any form of contractual or non-contractual relations (Pavić, 2005, p.137), modern development of the insurance market has allowed the injured party to file a direct lawsuit against a liable insurer under the existence of justified reasons – security of payments, simplification of proceedings, speedily obtaining compensation, compliance with public order to allow prompt restitution for damages etc. in which indirectly affects the legal position of the injured party allowing them simpler, expedite and surely obtaining compensation for occurred damages (Primorac, 2017, p.92). If the injured party receives compensation through insurance they lose the right to seek damages from the responsible person and, if the injured party receives full compensation from the responsible person (insured), they cannot seek another form of compensation from the liable insurer (Gorenc, 2005, p. 1482). It is of importance to note that Article 18 Directive 2009/103/EC also allows a direct right of action against the insurance undertaking covering the person responsible against civil liability as a result of an accident caused by a vehicle covered by insurance.

### **3. MINIMUM AMOUNTS COVERED BY COMPULSORY MTPL INSURANCE – SOLUTIONS IN THEORY**

An essential element in insuring the protection of victims of accidents also represents the institute of regulating minimum amounts covered by compulsory insurance or limitations of

insurance cover to certain minimal amounts in case of MTPL insurance in EU Member States (Primorac; Barun, 2017, p.102). Article 9(1). Directive 2009/103/EC prescribes in the case obligations for MTPL insurance in EU Member States which guarantees the insurers cover for personal injury, a minimum amount of cover of EUR 1 000 000 per victim or EUR 5 000 000 per claim (whatever the number of victims). This constitutes the minimum amount covered by compulsory insurance which represents limits to the insurers obligations, however each EU Member State may prescribe a higher amount. Croatian legislation has prescribed in Article 26(1) ZOOP that the obligation of an insurance undertaking ensuing from the insurance contract is represented by the insured amount valid on the day of the loss event (unless a greater amount has been contracted in an insurance contract). The minimum amount for which the insurance contract must be concluded shall be 42,750.000,00 HRK resulting from a loss event regardless of the number of injured parties for damage due to death, bodily injury and impairment to health (Article 26(8) ZOOP). This is regarding the minimum amounts covered by insurance which must have been/must be concluded in insurance contracts against MTPL insurance for all vehicle accidents which have taken place from the 1 July 2013 as this is when the Act on Amendments and Supplements to the Act on Compulsory Traffic Insurance from 2013 entered into force. This is about provisions included in the text of the Act on Amendments and Supplements to the Act on Compulsory Traffic Insurance from 2013 in which the minimum amounts covered by compulsory insurance has increased (in relation to the previous legal minimum amounts covered by insurance by a multiple number of times). For all vehicle accidents which occurred prior to 30 July 2013, Article 26(2) ZOOP will still be in force in which a minimum amount for which the insurance contract must be concluded shall be 3,500,000.00 HRK relating to vehicles (not including vehicles transporting hazardous substances) and is for damages due to death, bodily injury and impairment to health resulting from a loss event (Article 26(2.1) ZOOP). By prescribing minimum amounts covered by insurance the legislator wanted to provide injured parties protection to the minimum amount covered by insurance, not interfering with their right to seek damages from the responsible person, besides and above the minimum amount covered by insurance (Ćurković, 2013, p.132). The limit of the insurers obligation is established according to the compensation incurred by one loss event regardless of the number of injured parties. In cases when the amount of sustained damages does not exceed the minimum amounts covered by insurance – the insurer will be obliged to pay the total compensation for damages. In cases when the total compensation exceeds the minimum amounts covered by concluded insurance contracts – the insurer is obliged to pay compensation proportionally in regard to the insured amount and the amount of sustained damages.

#### **4. PROBLEMS REGARDING MINIMUM AMOUNTS COVERED BY MTPL INSURANCE IN CASE LAW**

Analysing case law in the Republic of Croatia it can be observed a problem of the combination of insured sums in situations when multiple insurers are responsible on the grounds of MTPL insurance. Regarding to situations in the occurrence of a loss event – vehicle accident in which a third party has suffered damages in which two or more motor vehicles whose owners concluded insurance contracts regarding MTPL insurance with the same insurer the insured sums are added. In the decision of the Supreme Court of the Republic of Croatia Rev 2411/94 from 19 March 1997 their legal standing is: „the fact that the plaintiff was injured as a third party in an accident caused by moving motor vehicles, the lower instance Courts had correctly concluded that the owners of motor vehicles are solidarily liable to the plaintiff for damages caused in the limits of obligations of their insurer to the amount of the insured sum. Provided that the owners of motor vehicles have the same insurer, it entails the injured party the right to request damages based on both insurance policies which in that case the insured amounts for

both insurance policies are combined “. The same legal standing can be seen in the decision of the Supreme Court of the Republic of Croatia Rev 448/06 from 18 May 2016 and many other judgements of the Supreme Court of the Republic of Croatia which may be concluded that the case law is stable and synonymous. Consequently, in situations when in a vehicle accident a third party obtained damages in which two or more motor vehicles whose owners concluded MTPL insurance with the same insurer, the injured party is in a beneficial legal situation as the insurer will be responsible for damages to the combined amount of the insured sums from both insurance contracts. Regarding to situations in the occurrence of a loss event – vehicle accident in which a third party has suffered damages in which two or more motor vehicles whose owners concluded insurance contracts regarding MTPL insurance with a different insurer the insured sums are combined. In the decision of the Supreme Court of the Republic of Croatia Rev 2187/1992-2 from 29 December 1992 their legal standing is: „... In the particular situation there are two concluded contracts on compulsory insurance and two owners of motor vehicles with two insurers. Insurance based on both contracts are in favour of the third party which may incur damages caused by the operation of these vehicles. In relation to both insurance contracts the third parties had suffered damages and on their behalf were both insurance contracts established. Consequently, the third party has the right to submit a claim for damages from both motor vehicle insurers, which makes them solidary liable in the limits of their insurance for injured persons which are the combined amounts of insured sums from both contracts, therefore each insurer is liable until the insured amount in the concluded insurance contract“. Contrary to the abovementioned, in the Supreme Court of the Republic of Croatia decision Rev-x-356/09 from the 14 September 2012 it is explicitly stated: “Limit of the insured amount in this case, which is regarding an accident between two vehicles with an injured person would be the combined insured sum only if the plaintiff was the liable insurer for the owners of both vehicles from liability against damage towards third parties and that the plaintiff as an injured person would have the status of a "third party", considering that the owners of motor vehicles are solidary liable for damages caused by the operation of motor vehicles towards third parties. This same legal standing can be seen in the use of Article 1069 ZOO)". In the judgement of the Supreme Court of the Republic of Croatia Rev 1510/13 from the 2 December 2015 inter alia is mentioned: ..."Having in mind the abovementioned facts, it is correctly decided by the lower instance Courts that the defendant shall be solidarily liable with the insurer of the other motor vehicle for damages caused by the operation of the motor vehicles in the accident, liable to the plaintiffs for damages as the predecessor of the plaintiff is a third party to which the owners of the motor vehicles and their insurers are solidarily liable for the damages caused in the light of Article 178(4) ZOO. However, the lower instance Courts during the evaluation of the amount of limit of insurance cover per loss event, which is the opposite of the legal standing of this Court, had concluded that despite the fact that per loss event the liable insurer, which is a different insurer than the defendants, paid compensation to the limit of the insured amount (respectively of 1,400,000.00 HRK) is not of importance for the payment of the defendants obligations. In cases where owners of motor vehicles shall be solidarily liable for third parties in the light of Article 178(4) ZOO are insured with different insurers, they are solidarily liable until the amount of limit of the insurance cover per loss event, it cannot be taken into account damages sought of the combined amounts of insurance cover for both motor vehicles. Consequently, in this case the payment of the whole insured amount of 1,400,000.00 HRK by the insurer of the other motor vehicle which took part in the loss event completely exhausted the amount of the insurance cover. An identical view can be found in the decision of this Court number Revx-510/09 which the applicant for revision refers to. In accordance to Article 85(1) Insurance Act ("Official gazette" number 46/97, 50/99, 116/99 hereinafter: ZOS) obligations of an insurance company for civil liability in the respect of use of motor vehicles cannot per loss event be greater than the insured sum which shall be passed by the Government of the

Republic of Croatia at the proposal of the supervisory body unless the insurance contract has not defined a greater sum, whilst paragraph 3 of the same Article prescribes if there are several injured parties and the total compensation exceeds the amount listed in paragraph 1 of this Article, the rights of the injured parties in regards to the insurance undertaking shall be reduced proportionally." Insurance contracts against MTPL insurance protects the injured parties who have suffered damages from accidents caused by motor vehicles in operation and therefore they should be in the same legal position in regards to seeking compensation for such damages. However, it can be concluded that "third parties" who have suffered damages from accidents caused by motor vehicles in operation in relation to the liable insurer of civil damages which the owners of motor vehicles have concluded MTPL insurance, have been placed in an unequal legal position. In cases which owners of motor vehicles have concluded MTPL insurance with the same insurer that insurer is liable up to the amount of the combined insured sum, in other cases where owners of motor vehicles which have participated in accidents in which "third parties" have suffered damages, have concluded MTPL insurance with different insurers that insurer is liable only up to one insured amount (due to solidary liability of insurers for civil damage). In cases where the liable insurer compensates suffered damages to the "third party" - injured party, the insurer gains the right of recourse towards the liable party (responsible person, that is their insurer) in which the insurer has the possibility to seek the compensated amount from the person who caused the damage. Therefore, the liable insurer gains the right to recourse from the insured person to the extent to which he has compensated for the damages to the third injured party to which he was under law or insurance terms and conditions was not obliged to compensate (Pavić, 2009, p.544). In the case where the same insurer provided insured cover for two or more liable parties for damages from an accident (as a result of the operation of motor vehicles) and compensated damages to the injured party, it is not possible for the insurer to request the right of recourse for the compensated amount for both liable parties, only from one.

## 5. CONCLUSION

The author concludes how the legislator with amendments and supplements to the Civil Obligations Act should enable the injured parties the same legal position in cases of limited civil liability of insurers for damages suffered through the operation of motor vehicles to third parties in situations where there are concluded contracts against MTPL insurance with the same insurer and situations when insurance contracts have been concluded with different insurers. The authors opinion how in a situation of a motor accident in which two or more motor vehicles participated (who's owners had insurance cover against MTPL insurance from the same or different insurers) and as a result the injured party suffered damages - the injured party should be entitled to the combination of the limits to insurance cover if the damage exceeds the limit. Through compulsory MTPL insurance, the goal is the protection of third injured parties, and not the protection of the insured and the protection of their assets (Ćurković, 2002, p.30). In the goal of achieving greater protection of the injured party it should be made possible the combination of insurance limits (if the damages exceed the limit) regardless of whether the liable parties are insured with the same or different insurers and in situations when insurers will not be entitled to the right of recourse as the third, injured party must be in the same legal position regardless of the liable parties insurance. If it is considered that there is no room for such combination of the insurance limits, then it should be explicitly stated by the legislator. Such practice would allow the courts when deciding on insurance limits to act in an equal manner regardless if it is regarding different insurers or the same insurer who concluded an MTPL insurance contract which participated in an accident in which a third party suffered damages.

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## **RESPONSIBILITY OF THE STATE FOR WORK OF STATE BODIES - THEORETICAL AND PRACTICAL SOLUTIONS**

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### **ABSTRACT**

*One of the basic principles of mandatory law is the prohibition of causing damage, which means that everyone is obliged to abstain from the procedure that can cause the damage to another. In this way, the legislator calls on all legal traffic participants to ban from the harmful treatment in advance, thus informing all potential perpetrators of the damage they commit unlawfully. Responsibility for damage is a liability in which one party is obliged to repair the damage to the other party, and the other is the first to claim damages. The assumptions of liability for damage have been determined by the legal theory and are five assumptions such as subjects responsibility for damage, the harmful action of a perpetrator, damage, causality between harmful actions and damage and unlawfulness. It is also important to point out two criteria for determining liability for damage such as liability on the basis of guilt and accountability based on the criterion of causality. The state as a participant in legal proceedings, at the same time the regulator of the legal formation, must bear the responsibility for the work of their bodies, just as the legal person is responsible for the damages of their employees. The trends of change in relation to state liability for damage is very positive and a big step forward in exercising the rights of individuals and their equality before the law.*

**Keywords:** *damage, legitimate expectations, liability for damage, state responsibility*

### **1. INTRODUCTION**

In this paper, we will try to show the relationship between the state and the individual in relation to the responsibility of the state for the damage that an individual is performing of his / her duties by a judge or administrative body. We will look at the very concept of damage, the criteria of responsibility, and through practical examples show how the state is responsible for the damage. Since legal theory and practice has a system of subjective responsibility (guilt responsibility) and an objective liability system (liability based on causality) we will elaborate on the question of which criteria determines the state's responsibility for the damage and which assumptions under each of the criteria should be the fulfilled, which is to be proved and on which the burden of proof is. We will also try to answer the question of whether the state is "untouchable" i.e. whether it is equal with individuals in the case of liability for compensation for damages committed by the judge in the performance of his duties. Withing the various circumstances in which responsibility for the damage caused by the judge in the performance of his duties, during the writing of this work, other interesting questions.

One such question is whether the state is responsible for the damage caused to an individual due to a change in the law. As there is a relatively young court practice on this issue, we have considered it useful to address this issue in this paper.

## **2. THE CONCEPT OF DAMAGE**

As one of the basic principles of mandatory law is the prohibition of causing damage. Thus the legislator by the provision of Art. 8. The Mandatory Obligations Act (hereinafter: ZOO) provides that everyone is obliged to abstain from proceedings that may cause damage to another. With this definition, the legislator invites all legal traffic participants to ban in advance, thus informing all potential perpetrators of the damage they commit unlawfully, which of course entails certain sanctions. Also, it is important to highlight liability for damage as a kind of civil liability. A common understanding of liability for damage is the direct relationship in which the perpetrator of damage is obliged to remedy the injured party's damage and the injured party can and is entitled to claim damages (Klarić P., 2003, p. 165). As the legal basis of liability for damage, the principle of the prohibition of damage (lat. *Neminem laedere*), which we have already stated as a duty to refrain from committing acts that could cause damage (Burazin, L., 2008, p. 1436). It is understood that Art. 8. of the ZOO does not impose any sanctions for damages because the compensation or settlement is different from case to case, so it would be impossible to foresee all situations and circumstances and to determine the extent and the way of compensation/settlement. The damage is aligned with natural restitution (by repairing damage or by substituting things) or compensated by a fair amount of money. It should be noted that the ban on the harmful behavior of legal traffic participants is also through other fundamental principles of mandatory law. Thus, the provision of Art. 9. of the ZOO prescribes that a participant in a mandatory relationship is obliged to fulfill his obligation and is responsible for its fulfillment. By the provisions of Art. 342. ZOO explicitly stipulates that the creditor has the right to demand repairment of the damage he has suffered if the debtor has failed to fulfill his obligation or is late with its fulfillment. In Art. 1045. of the ZOO it is obvious that the one who causes the damage to another is obliged to reimburse unless he proves that the damage was caused without his guilt. Therefore, the pest corresponds to the principle of presumption of guilt, and ordinary negligence is presumed. For damage to property or activities from which the increased risk of damage to the environment is incurred regardless of guilt. Likewise, regardless of the guilt, it is liable for damage and in other cases provided for by law. What defines damage is determined by Art. 1046. of the ZOO in which the damage is determined as a detriment to one's property (ordinary damage), the prevention of its increase (the lost profit) and the violation of the personality right (non-material damage). Ordinary damages and lost profits represent material damage, which damages the property of the injured party or the injured party him/herself until the property damage is manifested in the violation of the subjective rights and interests of the person.

## **3. ASSUMPTIONS OF LIABILITY FOR DAMAGE**

Responsibility for damage is a compulsory relationship whereby one party is obliged to repair the damage to the other party and the other is required to repair the damage (Vedriš, M., Klarić, P., 1995, p. 428). The legislator did not prescribe what these assumptions had to meet in order to have the obligation to compensate the damage, but this assumption was very firmly established and established by the legal theory. There are five assumptions that must be met cumulatively in order to create a liability compensation claim, which is the following assumptions:

- a) Responsibility for Damage
- b) Harmful activity of perpetrator
- c) Damage



- d) Causing connection between harmful actions and damage
- e) Unlawfulness

If any of the above assumptions were not fulfilled, then there is no liability for any damages.

### **3.1. Subjects liability for damage**

Responsibility for damage is on the injured party and perpetrator. The term "perpetrator" was deliberately not used (although in most cases the perpetrator is at the same time the person responsible for the damage) because there are cases when the perpetrator is not the responsible person. Thus, for example, the parents are responsible for the damage committed by their minor children, the legal person is liable for the damage caused by their employees to third parties. Thus, the Republic of Croatia (hereinafter: RH) is responsible for the damage caused by judges to third parties (physical and legal) in doing their duties, and that is the theme of this paper. The Law on Courts (hereinafter: ZS), in Art. 105., provides that RH shall be liable for the damage that the party is incurring in the proceedings by the judge with his illegal or improper work in the performance of his judicial duties. If the judge in the course of his or her duties during the proceedings has caused damage to a legal or physical person during the proceedings, then that physical or legal person is harmed, the perpetrator is a judge, and liability for damage is borne exclusively by the RH. The perpetrator/judge is not responsible independently or jointly with the Republic of Croatia. However, the RH, in accordance with Art.105, par. 2, ZS, has the right to regress the judge and shall ask the judge to reimburse the compensation only when the court has deliberately or intentionally done harm.

### **3.2. Damage act of perpetrator**

The harmful action of the perpetrator would be any action, omission or failure to act, which causes damages to the injured party. The judge would have done a damaging action if he/she would act in contravention of the law, profession rules or pre-prescribed mode of action, or if he failed to act. In any case, a harmful act must be committed in the performance of a judicial duty, and the injured party must be a party to the proceedings.

### **3.3. Damage**

If there is no damage, of course, there can be no liability for damage. The damaged party should prove that in the concrete case his property was reduced, that is, his increase was prevented or the injured party suffered unimpaired damage. Namely, it is not a rare in practice that there was even a damaging action, but there were no consequences named in Art. 1046 ZOO, or damage, did not exist and could not even occur.

### **3.4. Causing connection between harmful action and damage**

In order to be liable for damage, the injured party must prove the causal link between the harmful act and the damage. Damage can arise from various causes, so it makes harmful causation and damage to the causal link. Therefore, the damage must occur precisely as a result of a harmful action.

### **3.5. Unlawfulness**

Acting contrary to legal norms is an unlawful act. The legal norm implies all legal areas in which the violation of the same can result in damage. The maladministration of a judge is manifested through the unlawful and improper work of a judge. Illegal work is manifested as an act contrary to law, other regulation or general act, as well as a omission to apply the law, other regulation or general act. Improper work is manifested as an act or omission contrary to the usual or prescribed manner of carrying out the activity.

Here it is worth pointing out that the rule of law, the executive and the judiciary are tripartite, and each of them is independent and autonomous (Republika Hrvatska, Ministarstvo vanjskih i europskih poslova, 2017). In this context, the judiciary authority should be observed as a guarantee to the judge in his autonomy and independence in the exercise of his judicial function. The judge has the right to autonomously interpret a certain norm and to make a decision independently but must apply proper legal provisions in order to make a lawful decision. The lawfulness and lawful work of the court are guaranteed to all citizens and by the provision of Art. 29. of the Constitution of the Republic of Croatia, which provides that everyone has the right to have an independent and impartial tribunal established by law deciding in a fair and reasonable manner on his or her rights and obligations, or on suspicion or accusation of a criminal offense. In order to be responsible for the compensation of damage caused by the judge in the performance of his duties, it is necessary that three legal assumptions are cumulatively fulfilled:

1. Illegal or improper performance of a judge (improper action and its unlawfulness)
2. The existence of the damage caused to the plaintiff
3. a causal link between the illegal or improper work of the state administration bodies and the damages caused to the plaintiff (where it is important to prove that the damage was the direct consequence of the unlawful or irregular work of the state administration body, namely that the damage would not have arisen)

#### **4. CRITERIA FOR ESTABLISHING LIABILITY FOR DAMAGE**

There are two criteria for determining liability for damage: responsibility in the form of guilt - culpa (subjective liability) and liability for causality - cause (objective liability). According to the Art. 1045. of the ZOO, the perpetrator / responsible person is obliged to compensate the injured party unless he proves that the damage was caused without his guilt and which is the general principle of liability for damages. The injured party must prove the general assumptions for the damage, and guilt is presumed. Therefore, the injured party's fault must not be proven, it is implied, and in order to be free from liability for damage, the perpetrator / responsible person in the proceedings must prove that he/she is not guilty of the incurred damages. However, the legislator prescribed cases where the injured person needs with the assumptions of liability for damage also prove the pecuniary damage, then we are talking about the criterion of proven guilt. By the provisions of Art. 1049. of the ZOO prescribes that guilt exists when the damage caused deliberate or negligent damage. The defendant in this case, in addition to the general assumptions for liability for damage, must also prove the pecuniary damage. Responsibility for damage on the basis of causality exists irrespective of the cause of the perpetrator if there is a causal relationship between harmful acts and perpetrator. The injured party has the right to demand compensation for damages, in addition to the assumption of liability for damage, regardless of whether the injured party is guilty of the damage. In Croatian law, there are also cases of objective liability for damage where the causal link is made and there is no need to prove it. By the provisions of Art. 1063. of the ZOO stipulates that the damage caused in connection with dangerous things, or dangerous activity is considered to originate from that matter or activity, unless it is proved that they were not the cause of the damage. As the legislature nevertheless prescribes that the code objective liability can be relieved of liability for damage, our relative right is accepted in our right (absolute omission does not exist for any possibility of release from liability for damage). In contrast to subjective responsibility according to proven guilt criterion, objective liability perpetrator cannot relieve his liability for damages by proving that he is not guilty of the damage caused because the perpetrators guilt is not important, but he can be released from liability if he proves that the damage was caused by force majeure, by the guilt of the injured party or by the guilt of a third person. By which criterion is the RH responsible for the damage done by the judge performing

his/her duties? In our practice, for a long time and until recently the responsibility of the RH for damage was determined by the criterion of guilt and proven guilty of the judge/perpetrator. The Zagreb County Court, at its session in 2010, deciding on the appeals of the Municipal State Attorney's Office (hereinafter: ODO) against a verdict finding out the liability of the RH for the illegal and irregular work of the administrative bodies and the Administrative Court, Gžn-4028/05 where there is clearly visible practice of applying the criteria for liability for damage of the RH. The ODO complained of the verdict, pointing out that the plaintiff (the injured party) did not prove that the damage was the consequence of the illegal and improper work of the administrative bodies and the court and that he was committed with the will and intent of the perpetrator. Damage must be the consequence of the unlawful and irregular work of a judge, this is not disputable and such an objection is justified in each case irrespective of whether it is subjective or objective. However, it is a key part of the will and the intent of causing a damage. In the relevant judgment, the County Court refers to the provision of Art. 13. of the State Administration System Act (hereinafter: ZSDU), according to which the provisions of the State are responsible for the damage caused by the illegal and improper work of the state administration bodies and the provision of Art. 67. of the ZS, which prescribes the responsibility of the judges for the damage he or she incurs in the exercise of his judicial function, and the damage he or she incurs in the performance of the judicial duty corresponds to the RH. In the opinion of the County Court, the cited legal regulations did not establish a system of RC's objective liability for damage due to illegal and improper work of the state and public administration bodies, i.e. a judge based on the principle of causality, but a guilt-based system of subjective liability. It is further stated that for the establishment of the responsibility of the RH, the responsible person in the state administration body or the court has had the will or at least agreed to be harmed by such action, and on this basis it is determined to establish the existence of voluntary elements as qualified forms of guilt (gross negligence, intent), which is the burden of proof on the plaintiff/injured party. The system of accountability based on the criterion of guilt and proven guilt is in the opinion of the author unsustainable and does not reflect the rule of law and equality of all before the law. Namely, considering the constitutional definition of the independence and the high autonomy of judges, it is very difficult to prove the unlawful and improper performance of a judge in practice (it is said that such work must visibly deviate from the usual or misapplication or non-application of general regulations must be obvious) and only his will/consent to be harmed, with intent or extreme negligence, is almost impossible to prove, so the injured person never gets a fair amount of damage. It was for this reason that it had to leave the system of subjective liability of the RH for the damage and apply the criterion of causal/objective liability for the damage. Applying the general principles of European law, as well as the position of the European Court of Human Rights, the Constitutional Court of the RH on 21. February 2007 adopted Decision No. U-III / 2314/2006. In the aforementioned decision, the Constitutional Court assessed the unacceptable standpoints of the ordinary courts (the County and Supreme Court of the RH), in the part in which it is interpreted that there is no unlawful or irregular work of the state administration bodies within the meaning of Art. 13. of the ZSDU if there is no "will and consent of state bodies to damage the rights and interests of the third party", or "conscious behaviour contrary to law with the will to harm someone". In the following, the Constitutional Court states that the competent courts erroneously consider that for the public liability of the RH the damage to the existence of the will or the consent that the law and the interests of the third party are harmed by illegal or improper work means that no unlawful or improper work state administration bodies, as the first assumption of State liability for damage in terms of art. 13. ZSDU. The Constitutional Court points out in this regard that the ZSDU established an objective liability system for damages to the RH due to the illegal or improper work of the state and public administration bodies based on the principle of causality rather than the guilty plea as well as the primary and

direct responsibility of the state for the illegal or improper work of state and public administration bodies is a special expression of the principle of the rule of law, one of the highest values of the constitutional order of the RH. It follows from the foregoing that the view expressed in the County Court's ruling No. Gžn - 4028/05 of 20. January 2010, which was previously explained, is completely unacceptable, since it is contrary to the above-mentioned understanding of the Constitutional Court of the RH, whose decisions are mandatory for all and are to be respected by every physical and legal person, in accordance with the provision of Art. 3.1 par. 1. of the Constitutional Act on the Constitutional Court of the RH. Starting from the understanding of the Constitutional Court of the RH, for the existence of the State's public liability for damage under Art. 13. ZSDU and Art. 105. ZS, the State's liability for damage does not depend on the existence of voluntary elements with the responsible person in the state administration body or the court as qualified forms of guilt (intent, gross negligence), but it must be established that the damage was caused as a direct consequence of the illegal or irregular work of the body state administration, that is, that the damage would not have arisen that it was not there. We certainly believe that the system of objective accountability reflects the rule of law in the full sense of the word and allows everyone equal status before the law, and we hope that the Constitutional Court's decision has incorporated the foundations of future practice and the possibility that the injured party was harmed in court proceedings Irregular and unlawful work of a judge in accordance with the general principles of the mandatory law can be established to claim damages.

## **5. LEGITIMATE EXPECTATIONS**

Writing on the State's responsibility for compensation for damages committed by judges and administrative bodies imposes an interesting question (irrelevant to the work of judges) - what if an individual act in accordance with the applicable regulations and that the state of these regulations is changed and thus prevents an individual from doing further? As an author of this paper, such a question appeared in practice and raised the issue of liability for Croatia's damage due to changes in regulations. In this particular case, the RH adopted the Law on Public Executioners (hereinafter: ZJO) as well as the new Distraint Law (hereinafter: the OZ), and which laws stipulated certain requirements to public enforcers, in relation to its professional education and equipping business premises, etc. According to the quoted laws, appointed public defenders, who fulfilled all the required conditions, were granted the approval of the Ministry of Justice for the commencement of work. However, by passing the Act on the Cessation of the Law on Public Executioners (hereinafter: ZPVZJO), the RH ultimately abolished the Public Prosecutor's Office after several postponements of the commencement of the work of public enforcement officers, thus completely preventing elected and appointed public enforcement officers from performing this service. With the adoption of the ZPVZJO, appointed public enforcers have undoubtedly caused the damage, namely the ordinary damage (funds invested), the lost benefit (their work was disabled and thus the gain of benefits through work) and the non-material damage (violation of the personality rights), but it is doubtful whether response to the damage. Considering the decision of the Supreme Court of the RH since 16. July 2003 no. Rev.-1332/01, and in which decision has expressed the view that the state cannot be held liable for the damage caused by the adoption of a given law since the adoption of a law can not constitute a harmful act would result in the State not being responsible for the damage caused by the adoption of the ZPVZJO. Strongly formalistically, such an attitude is understandable because there is no assumption of responsibility for the damage-unlawfulness of the act. In the context of the rule of law and the rights of an individual, the fact that the appointed public defenders, having regard to the existing legal regulations, had legitimate expectations that they would start working as a public enforcer and in that way generate income by fulfilling all the conditions.

As a result of the situation, the public defenders also addressed the Constitutional Court of the RH. By the Constitutional Court Decision No. U-I-5612/2011, U-I-6274/2011, U-I-178/2012 and U-I-480/2012, dated 23 January. 2013 ("Official Gazette", No. 13/13), public enforcers have been granted the right to legitimate expectations. In point 22.1. The Constitutional Court's solutions specifically emphasized that "the state of uncertainty and insecurity in which the appointed public defendants were found to be due to the repeated delay of the beginning of their work and the subsequent complete abolition of the profession for which these persons had been prepared and for which the qualifications had lasted for about one year. This state of increased uncertainty and uncertainty was caused by repeated legislative interventions, which in itself is inconsistent with the requirements that derive from the principles of the rule of law.

Secondly, since the legislator has not transposed a transitional legislative regime that would adequately address the problem of already appointed public defenders after the abolition of that institute, a fair balance was struck between the goal the legislator wanted to achieve by abolishing the public enforcers' institution in the general or public interest and protecting the interests of persons appointed for public enforcers. This omission is also not in line with the requirements that derive from the principles of the rule of law and directly violates the principle of legitimate expectations of persons who have relied on the laws and valid individual legal acts which, under these laws, have been adopted. Consequently, even assuming that the individual legal situation of the public enforcers and could be presented as if it were to serve a general or public interest, the appointed public defenders submitted and still submit an excessive individual burden of the overall legal reform of the enforcement system of the state." In making its decision, the Constitutional Court has been guided by the established practice of the Court of Justice of the European Union, where the right to legitimate expectations is an integral part of the legal order. It is also emphasized that the lower courts acted in accordance with the position of the Constitutional Court, and there are already several legally binding decisions determining the responsibility of the RH for the damage caused to public enforcers.

## 6. CONCLUSION

The state as a participant in legal proceedings, at the same time the regulator and the legal formation, must bear the responsibility for the work of their bodies, just as the legal person is responsible for the treatment of its employees. Throughout our work, we have shown a change in the trend of virtually irremediable state when it comes to liability for damages, and to bring a state to level of equality with all other legal participants. At present, it is unthinkable that administrative bodies or judges in the exercise of judicial function make obvious damage through illegal work, but the injured party remains without settling damage and any satisfaction because in reality no gross negligence or intent can be proven as a form of a guilty plea. By establishing a system of objective accountability, individuals are equally enabled and the state requires compensation for damages. The criterion of liability for guilty damages, proven guilt, can only be an exception to legal theory and practice, and not a rule, and should never be applied to the state's liability for damage. Likewise, setting new values, recognizing the right of the individual to legitimate expectations, has certainly influenced the state to bring laws more into account by taking into account the repercussions for all the addresses of the law it intends to bring. With the violation of the legitimate expectations of the individual, the states bear the consequences of liability for damage, regardless of the fact that there is no unlawfulness of the action in a strictly formal sense. We state this trend of change with regard to state liability for damages very positive and we see it as a big step forward in exercising the rights of individuals and their equality before the law.

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## THE DISCRETIONARY POWER OF COMPETENT AUTHORITIES IN APPLYING STATE AID RULES ON RESCUE AND RESTRUCTURING

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### ABSTRACT

*Following the adoption of the new Commission's Guidelines on rescue and restructuring, the authors take a closer look into the public authority's decision-making procedure to award restructuring aid. The analysis focuses on the national level of a decision-making process prior to the notification of restructuring aid to the Commission, using the example of the Republic of Croatia. The authors question the national procedure(s), its transparency and the margins of State's discretionary power to decide if and who to award the restructuring aid and initiate the procedure before the European Commission. It is being argued that the wider the discretionary power of the competent authorities who grant restructuring aid, the wider is the potential of negative social, financial and market-wise consequences both for the State as well as the recipient undertaking. In order to avoid worst possible scenario, the authors suggest de lege ferenda proposal of the assessment criteria.*

**Keywords:** *discretionary power, firm in difficulty, restructuring aid, state aid*

### 1. INTRODUCTION

“Experience has shown time and again that “...the ill-considered use of public money to delay the difficult process of structural reform may in fact substantially harm the competitiveness of Europe in the longer term.”<sup>1</sup> The undertakings facing serious difficulties in maintaining liquidity and daily business operations due to lack of capital and financing, having exhausted available market options to secure further liquid capital, may opt to address a public body (the State) to secure aid for either rescue or restructuring. The State, after letting the undertaking in difficulty explore the market options or applying (unsuccessfully) MEO principle in finding appropriate strategic partner and /or investor, may agree to restore the viability of the undertaking in difficulty by resorting to rescue and restructuring aid. In both cases, by doing so, the undertaking as well as the State need to follow stringent requirements addressing primarily the European Commission how to act when such a proposal is submitted for its consent. The requirements and the criteria for the Commission to follow when the proposal is submitted by the Member States are summarized in the soft law - The Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulties, introduced in July 2014<sup>2</sup> (hereinafter: the R&R Guidelines). Yet, the reasoning and the decision-making process that precedes is left to Member States. Decision to agree to award the restructuring aid to an undertaking in difficulty is led by Article 107 of the Treaty on the functioning of the European

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<sup>1</sup> Eva Valle & Koen Van de Castele, Revision of the Rescue and Restructuring Guidelines: A Crackdown?, 2004 Eur. St. Aid L.Q. 9 2004

<sup>2</sup> Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty, Official Journal C 249, 31.07.2014, p.1

Union<sup>3</sup> whereby aid granted "...through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market"<sup>4</sup>, unless the aid falls under exceptions that are considered compatible with the internal market. Between the direct application of Article 107 and the restructuring aid proposal prepared and submitted by the Member State to the Commission for approval, an entire internal decision-making procedure of examining the case and deciding on whether or not to grant the restructuring aid, is left to that Member State. Here, two questions rise interest of the authors: first, what is the decisive relevance of discretion by which the Member States decide whether or not to grant the restructuring aid and second, whether the initiative to and/or from the Member State with the proposal to grant the restructuring aid is internally considered (and communicated) open to all undertakings in difficulty (falling under the R&R Guidelines 2014). The authors first analyse the procedure before the Commission (Section 2), followed by the procedure in a selected Member State (Section 3). Concluding remarks are offered last (Section 4).

## **2. GUIDELINES ON RESCUE AND RESTRUCTURING 2014 – WHAT THE COMMISSION SEEKS AND THE MEMBER STATES SHOULD DEMONSTRATE**

A Member State of the European Union may grant state aid not excluded from notification to the Commission only after the Commission's decision on aid's compatibility with the internal market. This obligation stems from Article 108 TFEU and Article 3 of the Regulation 2015/1589<sup>5</sup> precisising that "aid notifiable pursuant to Article 2(1) shall not be put into effect before the Commission has taken, or is deemed to have taken, a decision authorising such aid." Following the received notification on new aid, the Commission starts with the examination of the notification; the outcome may be diverse:

- a) the Commission may establish that the notified measure does not constitute aid;
- b) the Commission may establish that the notified measure constitutes aid compatible with the internal market falling within the scope of article 107(1) TFEU or
- c) the Commission may establish that the notified aid raises doubt as to its compatibility with internal market within the scope of article 107(1) TFEU and pursue the matter further in form of formal investigation procedure.

Even though the Guidelines address the Commission and not the Member States, by providing criteria to facilitate the Commission's final decision, the Member States are well aware and cautious of the Guidelines. In other words, after the (political) decision has been taken but before addressing the Commission with the notification of new aid, they take the Guidelines into account while preparing the proposal to be submitted to the Commission. The R&R Guidelines 2014 require the Commission to look whether the Member State which proposes to grant aid to an undertaking in difficulty has succeeded to "...demonstrate on objective grounds that the undertaking concerned is in difficulty..."<sup>6</sup>, providing detailed criteria to assess whether or not a particular undertaking may be considered in difficulty.<sup>7</sup>

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<sup>3</sup> OJ C 115, 9.5.2008, p. 91–92

<sup>4</sup> *ibid*

<sup>5</sup> Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union, OJ L 248, 24.9.2015, p. 9

<sup>6</sup> Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty, Official Journal C 249, 31.07.2014, point 19.

<sup>7</sup> *Ibid*, point 20.

For the purposes of these guidelines, an undertaking is considered to be in difficulty when, without intervention by the State, it will almost certainly be condemned to going out of business in the short or medium term. Therefore, an undertaking is considered to be in difficulty if at least one of the following circumstances occurs:



Besides assessing whether the undertaking in question is in difficulty, and thus falling within the scope of point 20 of the R&R Guidelines 2014, the Commission also considers other criteria. First, a well – defined objective of common interest must be determined under the scope of Article 107(3) of the TFEU. Second, it needs to be proved that the State intervention is sought in a situation where market cannot further deliver material improvement of the undertaking. Next, the Commission examines whether the aid measure is appropriate insofar as it is not under nor over the level that may have equally successfully contributed to the same goal. The Commission also looks into the incentive effect to see whether the objective of common interest would (not) be reached without the proposed aid. The Member States need also to present the proportionate character of the notified aid, ways to avoid distortion of competition and negative effects on trade between Member States and lastly, the transparency of the entire procedure needs to be secured. It is important to mention another crucial criterion of assessment by the Commission; the Commission also looks at whether the Member State, in a given case, behaves as would the private investor under the same circumstances. What the Commission seeks is the rationale behind the decision of the Member State to “invest” in an undertaking in difficulty. Therefore, the Member State, in individual case, should scrutinize its own decision to MEOP (market economy operator principle) test whereby “... economic transactions carried out by a public body do not confer an advantage, and therefore do not constitute aid, if they are carried out in line with normal market conditions...”<sup>8</sup> Or, in other words – the Member State needs to prove that the private investor would make the same decision as the Member State and the comparison is made strictly as per their market behaviour and decision-making process. This point was explicitly raised by the Commission in the Slovenian Polzela case in 2016. The Commission explained that “[t]he behaviour of public creditors may also be compared to that of hypothetical private creditors that find themselves in a similar situation (“private creditor test”). Therefore, if a Member State argues that the economic transaction is in line with that test, it must provide evidence showing that the decision to carry out the transaction was taken on the basis of an assessment that a rational private creditor would have carried out to determine the transaction's profitability.”<sup>9</sup> Hence, a Member State investing in an undertaking currently in difficulties is justifiable if there is a likely chance that the business will become profitable again. Some authors<sup>10</sup> question the mere existence of rescue and restructuring aid, emphasising that ailing undertakings should succumb to market conditions and that rescue and restructuring aid would not contribute to a different outcome than that of bankruptcy or insolvency proceedings that may as well keep viable parts of undertaking in the market, concluding that

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a) In the case of a limited liability company (25), where more than half of its subscribed share capital (26) has disappeared as a result of accumulated losses. This is the case when deduction of accumulated losses from reserves (and all other elements generally considered as part of the own funds of the company) leads to a negative cumulative amount that exceeds half of the subscribed share capital.

(b) In the case of a company where at least some members have unlimited liability for the debt of the company (27), where more than half of its capital as shown in the company accounts has disappeared as a result of accumulated losses.

(c) Where the undertaking is subject to collective insolvency proceedings or fulfils the criteria under its domestic law for being placed in collective insolvency proceedings at the request of its creditors.

(d) In the case of an undertaking that is not an SME, where, for the past two years:

i.

the undertaking's book debt to equity ratio has been greater than 7,5 and

ii.

the undertaking's EBITDA interest coverage ratio has been below 1,0.

<sup>8</sup> Syndicat français de l'Express international (SFEI) and others v La Poste and others., C-39/94, EU:C:1996:285

<sup>9</sup> State aid SA.40419 – Slovenia – Restructuring aid to Polzela d.d., Official Journal of the European Union, C 258, 15 July 2016

<sup>10</sup> Maier-Rigaud, Frank and Christopher Milde (2015) The Rescue and Restructuring Aid Guidelines of the European Commission - An Economic Point of View, World Competition: Law and Economics Review, 38(2), Available at SSRN: <https://ssrn.com/abstract=2560227>

the Commission was "(m)ore likely, ...subject to political pressure from member states pushing in favour of retaining this instrument of adjusting market outcomes and from large undertakings that, as mentioned above, benefit from the mere possibility of R&R aid through lower cost of capital".<sup>11</sup> The pressure may actually be two-fold; the internal one to attempt to save the failing undertakings of Member State's interest and, to achieve that objective, its pressure upon the Commission to see the cases through. It is the former one, i.e. the question of existence of political pressure, the political ratio behind the decision empowered by the discretionary right of the State to decide who to grant restructuring aid amongst those who potentially qualify (but either do not apply or are not being motivated to apply for aid), that the authors seek to explore in terms of its decisive margins. One may say that there are two different worlds colliding: the first one relating to the Commission's decision – making procedure and the other one relating to Member States's procedure which potentially use their discretionary power to push forward those dossiers that they (politically) consider vital due to reasons other than those listed in R&R Guidelines – the reasons that a private market operator would not find compelling in its business decision – making process. Hence, the factual conclusion that "litigation on rescue and restructuring aid typically focuses on the question as to whether the behaviour of the public authorities was in line with the behaviour of a private investor..."<sup>12</sup> gives rise to question whether the State provides sufficient assurances that voluntary, discretionary power is limited to the minimum so as to avoid politically motivated decisions. This may result in unsuccessful restructuring and aid to be recovered. In such a case, the undertaking needs to return the money received as well as the guaranteed loans and having failed that, the undertaking goes bankrupt and the inevitable loss is accounted for through the State budget. The consequences further embrace social and unemployment benefits for the workers, secured by the budget as well. Overall information on granted aid in terms of objective, instruments and amounts of aid can be accessed on State Aid Transparency Public Search<sup>13</sup> (hereinafter: Transparency) but the data provided are rather limited and vary from one Member State to another. The Commission, during the overall modernization of State policy made the Transparency<sup>14</sup> its cornerstone, requiring that state aid granted by Member States to undertakings above €500,000, is publicly disclosed as regards the identity of the beneficiary, the amount and objective of the aid as well as the legal basis of the aid granted. The Transparency, nonetheless and without objection, presents the cases submitted / notified to the Commission, whereas the question of transparency lies primarily with the Member States, whether they have initially notified all aid granted or not. As some authors argued, „... for a number of decades, State aid policy remained defacto unenforced. In particular, Member States did not comply with their duty to notify new aid schemes to the EU Commission. In addition, Member States seldom implemented EU Commission Decisions declaring aids incompatible with the common market by recovering the aid from the recipient.“<sup>15</sup> It is precisely these undisclosed data that is most telling.

### **3. GRANTING RESTRUCTURING AID IN A MEMBER STATE; THE PROCEDURE AND ITS TRANSPARENCY (CROATIAN EXAMPLE)**

Firms that find themselves in difficulty have an option either to explore different market options at hand, declare (pre)bankruptcy procedure or resort to restructuring aid. Should they opt for the latter, they would channel their request via the Government's institution responsible for the sector/industry of the undertaking's prime business to the Ministry of Finance (MoF),

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<sup>11</sup> *ibid*

<sup>12</sup> . Janus, R., Orzan M.F. in Hoffman, H.C.H, Micheau, C., State aid law of the European Union, Oxford University Press, 2016, p. 299

<sup>13</sup> <https://webgate.ec.europa.eu/competition/transparency/public/search/results/HR>

<sup>14</sup> Competition Policy Brief, Issue 4, ISBN 978-92-79-35545-5, ISSN: 2315-3113, May 2014

<sup>15</sup> Marco Botta, State Aid Control in South-East Europe: The Endless Transition, EStAL 1 2013

responsible for the matters of state aid and communication with the Commission. It is, at this point, worth mentioning the Government State Aid Policy Guidelines<sup>16</sup> that, in the area of rescue and restructuring, reiterate the goals to be achieved: to provide liquidity support, to ensure viability and to provide temporary liquidity assistance to support the restructuring of the undertaking but also, to minimize sectoral aid simultaneously with expanding the horizontal aid. There are at least two problems identified by the authors. The first one relates to the (insufficient) procedural rules in granting state aid to rescue and restructuring and the other one to the lack of transparency and criteria for decision making.

### **3.1. The normative aspect of aid granting procedure**

The procedure is regulated by the Rules of proceedings on proposal submission of state aid, state aid data, *de minimis* state aid and registry of state aid and *de minimis* state aid<sup>17</sup> (hereinafter: the Rules). The Rules of proceedings represents a technically administrative input for its addressees – aid grantors - in terms of procedural aspects but lacks the substantive input and criteria on grounds of potential decision and outcome. In essence, the procedure starts when the undertaking in difficulty approaches or is approached by the competent institution (aid grantor) with the initiative to finance its restructuring via restructuring aid. Once the (political) decision by the competent institution is made, that institution is obliged to submit its proposal to the MoF, amongst others, by completing a required form 3.III.b – *additional data on restructuring aid to nonfinancial undertakings in difficulty: individual aid*.<sup>18</sup> The data sought are organized by sections that, in fact, represent the breakdown of the R&R Guidelines in form of a questionnaire to which the sectoral ministry on behalf of the undertaking in difficulty needs to answer and provide information. The fact that the form is completed does not in itself mean that the decision had been made on the grounds of these criteria. The sectoral ministry then addresses the individual aid to MoF; the MoF takes up to 45 days to issue its opinion on the proposal from the aspect of its compatibility with state aid rules and state aid policy of the Republic of Croatia. If the findings are positive, the MoF processes it further towards the Commission. If, however, the MoF finds the proposal contrary to state aid rules and / or the Government's state aid policy, it will address the issue of incompatibility with the proposing ministry to correct it accordingly in the following 30 days. Once the internal administrative data have been gathered, the Ministry of Finance contacts the Commission, precisely, DG Competition. The DG Competition, following the R&R Guidelines 2014, examines the case and reaches its decision. These general procedural rules are extremely vague and are not remotely precise enough to provide legal certainty to parties involved. First of all, it is uncertain how the procedure starts as the Rules regulate the procedure only from the moment the competent institution (aid grantor) has already made its decision and now has to communicate it to the MoF. This only means that the most relevant moment of decision-making procedure is entirely unregulated both in procedure and substance and is left entirely to the discretion of the aid grantor. The authors find this normative void at the very least unacceptable because it is prone to abuse. To provide a legal certainty and ensure the protective cushion, existing national procedure should also make internal *how's* be known, introducing criteria that both private and public undertakings in difficulty should adhere to if they wish to be restructured by state aid. Such criteria should develop upon R&R Guidelines introducing additional elements safeguarding that the interest of the State is indeed being secured. For instance, these criteria may be, e.g. the risk assessment of State's involvement in undertaking's restructuring, the

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<sup>16</sup> Government State Aid Policy Guidelines 2017-2019, Official Gazette no. NN 27/2017, 24.3.2017

<sup>17</sup> Official Gazette no. 121/2016

<sup>18</sup> www.mfin.hr ; Regulation 794/2004, 21.4. 2004. (OJ EU, L 140, 30.4. 2004, L 302, 1.11.2006., L 407, 30.12.2006.; L 82, 25.3.2008.; L 313, 22.11.2008.; L 81, 27.3.2009., L 308, 24.11.2009.; L 109, 12.4.2014., L 325 10.12.2015., L 51, 26.2.2016.), Regulation 2015/2282, 27. 11.2015. (OJ EU, L325, od 10.12.2015.)

investor's ratio (why should the State invest and what gains should it expect by what time), whether there already is the consent between the existing creditors on debt accountability and support for restructuring process and the existence of prospective strategic partner at a later stage of restructuring process. Going back to MEOP as presented above, it would be perhaps advisable to also, prior to and as part of the decision – making process whether and whom to grant restructuring aid, make a check list of when to apply (allowing the window of at least 6 months for the procedure to be completed), introducing some elements of MEOP (that the Commission would look at anyhow) and provide business and market rationale making it easier for the State to decide on the case. Having an internal procedure, communicated and publicized, not only provides for a legal certainty but also offers more security to the State justifying its decision. The existing procedure does not encompass the grounds on which a particular undertaking in difficulty should indeed receive restructuring aid; the case is built properly before the Commission as per the R&R Guidelines requirements but do not foresee internal benchmarks for decision made nor it makes it known the total number of undertakings that applied and the justified grounds of the administration's decision both for those who failed to be granted restructuring aid and for those who have.

### **3.2 The transparency of restructuring aid granting procedure**

The fact that there are no precise rules on procedure and criteria necessarily leads to lack of transparency. Even if there were procedure and criteria, it would not suffice to guarantee legal certainty and avoidance of political decision-making. Searching for the answer brings us back to the beginning of the decision-making process and its political momentum, specifically if the State itself suggests to the undertaking to resort to restructuring aid falling under scope of the R&R Guidelines 2014. Similar thoughts are shared by Phedon and Ferruz who have found that "... a significant proportion of these measures suggest that aid provisions are inefficient in the sense that they cost more than the output they save. These findings cast doubt on the economic rationality of restructuring aid and suggest that governments may be guided by political objectives when they bail out a firm."<sup>19</sup>. In order to guarantee full transparency of the system, it would be necessary to have access to information (perhaps not ad nominem but by number of applicants, sector, aid instrument, amount sought) of overall applications, criteria of decision-making by the State and, in case of rejection or approval, the grounds of rejection stemming from the criteria. It would provide an insight into legal as well as economic ratio behind a public authority decision(s) (not) to grant restructuring aid. Currently, what is left outside of knowing is the number of undertakings in difficulty that have applied to be granted restructuring aid but failed in their attempt being rejected by the State whereas other have succeeded. Not being aware of their existence and, if they have applied and were rejected, of the grounds of rejection, criteria applied etc., one may wonder why have some undertakings been granted restructuring aid. They may have either been a) the only ones applied or b) the only once successful in presenting their case or c) the only once of vital socio-economic and political importance for the State to proceed further. In the case of c), one may see beyond just legal and socio-economic reasoning and resort to political judgement that would favour circumstances beneficial for maintenance of political power, which has close to nothing to do with facts and numbers. To that point, some authors suggest the susceptible manifestation or state aid if used improperly by "...becoming a political tool to increase chances of re-election for incumbent parties. When this is the case, the objective of the aid becomes less important. This can have serious consequences in terms of wasteful spending and effects on competition.

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<sup>19</sup> M. A. Bolsa Ferruz, P. Nicolaidis, An Economic Assessment of State Aid for Restructuring Firms in Difficulty: Theoretical Considerations, Empirical Analysis and Proposals for Reform, *World Competition* 37, no. 2 (2014)

<sup>20</sup> The worst-case scenario, naturally, is granting aid to undertaking but failing to notify the Commission of the case. This particular offence that Member States may wilfully expose themselves to is, however, not in the focus of the authors. Another important issue relates to information campaign and availability of information to undertakings that they may actually resort to this particular type of aid. In no circumstance do the author support a wide promotion of restructuring aid beyond what is justified, specifically considering its distortive character. The restructuring aid through public financing should be limited to undertakings of vital importance. As others authors also argue "The rules should act as a stronger deterrent for companies to rely on support from the State and avoid introducing those changes which are necessary for their long-term viability."<sup>21</sup>, the exit of failing undertakings is an everyday occurrence in the market and undertakings should not be artificially and beyond economic logic preserved from their inevitable faith. Yet, the question does not relate to circumstance of the decision made to proceed with notification process of State granting aid to particular undertaking but why that particular undertaking and not another (if another exists, the information is not shared hence the objective grounds of decision made is unknown). In earlier years, potentially, Member States were faced with a temptation to use aid to provide benefits to their own industries to maintain their national market presence and give them additional economic advantage; or, as some authors outline, the Member States were faced with a "prisoner's dilemma" situations where domestic aid is granted to restore "the level playing field" with subsidised foreign industries."<sup>22</sup> If, hypothetically, a number of undertakings apply for restructuring aid, would the Member State make a discretionary decision to assist, for instance, either only those where the State has ownership, full or partial, or not? Would, in case where there is a mix of applicants between public and private, the State opt for a latter driven by its political interest to maintain the company's operations alive? The only nationally available information on rescue and restructuring aid may be found in the Ministry of Finance's overall annual report on state aid<sup>23</sup>; the report provides information on all aid granted to beneficiaries by aim, instrument and grantors. Last publicly available report, issued for 2015 indicates that the rescue and restructuring aid amounted to 43,7 million HRK (€5.7 million) in the form of debt write off, capital investment, loans and protested guarantees. It is worth mentioning that two (2) publicly owned undertakings in difficulties were beneficiaries of the total R&R aid in 2015. It is not so much the available information triggering our interest as much as the information missing from the report. Most notably this refers to information on undertakings that applied for state aid but failed to receive it. Particularly interesting in that regard is the information on the ownership structure of the firms in difficulty applying for restructuring aid. Is the state favouring its own undertaking over private ones? This fear is supported by the budgetary allocations for 2017<sup>24</sup>, which display the possible discriminatory character of restructuring state aid between private and public undertakings in difficulty, allocating restructuring aid solely to publicly owned undertakings. Apart from the guarantees, private undertakings in difficulty may not benefit from restructuring aid on equal footing as the state owned (or state majority owned) companies where budgetary allocation for restructuring aid amounts to HRK 3 million (shipbuilding under restructuring process excluded). This

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<sup>20</sup> Buts C., Joris T. i Jegers M. in *State Aid Policy in the EU Member States – It's a Different Game They Play*, State Aid Policy in the EU Member States, EstAL 21 (2013).

<sup>21</sup> Eva Valle & Koen Van de Castele, *Revision of the Rescue and Restructuring Guidelines: A Crackdown?*, 2004 Eur. St. Aid L.Q. 9 (2004)

<sup>22</sup> Sanoussi Bilal, Phedon Nicolaïdes, *Understanding State Aid Policy in the European Community: Perspectives on Rules and Practice*, Kluwer Law International, 1999

<sup>23</sup> Yearly report on state aid  
<https://vlada.gov.hr/UserDocsImages/Sjednice/2017/05%20svibanj/37%20sjednica%20VRH/37%20-%2010%20b.pdf>

<sup>24</sup> Official Gazette no. 119/2016 of 20.12.2016 at [https://narodne-novine.nn.hr/edition\\_pdf.aspx?eid=129634](https://narodne-novine.nn.hr/edition_pdf.aspx?eid=129634)

amount is significantly insufficient as a financial injection hence, the interested parties (in this case subject to ownership) need to signal their needs early on in the year, to be first internally processed prior to formal submission of their case(s) before the Commission. It is unknown whether then the undertakings are accepted, amongst others, on the "first come, first serve" basis, whilst the allocated budget is still available for use? Different situation is with restructuring aid in the form of guarantees whereby the budget allocation is significantly different and amounts to HRK 5.650 bln, yet it is aimed at the entire economic sector, public, private, SMEs, recapitalization and export guarantee support; there is far more spread of allocated instrument to be used throughout the fiscal year. Taking into consideration all said above, we may conclude that the decision by the State is highly discretionary and voluntary in terms of selecting which undertakings (and why) to grant aid for restructuring and returning to viability. The consequences may be severe for both the undertaking and the State in budgetary terms. For instance, in the procedure initiated by the Commission as laid down in Article 108(2) of the TFEU concerning the aid measure provided to a petrochemical company Oltchim the Commission, in its letter to Member State, expressed its view that measures under evaluation whether they constitute state aid or not "... may confer aid to Oltchim because the public creditors and suppliers may have acted in a different way than a market economy operator in a similar situation. It is the Commission's preliminary view that all the above measures may amount to rescue and restructuring aid." The procedure has not been finalized, therefore the findings of the Commission remains unknown; should the Commission establish that the measures under scrutiny represent state aid, the recovered aid would have to be paid back to State.

#### 4. CONCLUSION

The aim of this article was to explore the margins of Member States' discretion in granting restructuring aid. The analysis was done using a Croatian example. The results display a lack of procedural rules and criteria of decision – making process at its initial level. As some authors argued, "... for a number of decades, State aid policy remained defacto unenforced. In particular, Member States did not comply with their duty to notify new aid schemes to the EU Commission. In addition, Member States seldom implemented EU Commission Decisions declaring aids incompatible with the common market by recovering the aid from the recipient."<sup>25</sup> Discretion leads us now to selectivity; potentially, the Member States may be selective in their decision – making using their discretionary power or as the Notion on State aid defines it in its point 123 and 124 "General measures which prima facie apply to all undertakings but are limited by the discretionary power of the public administration are selective. This is the case where meeting the given criteria does not automatically result in an entitlement to the measure." The explanation is elaborated to precise that "Public administrations have discretionary power in applying a measure, in particular, where the criteria for granting the aid are formulated in a very general or vague manner that necessarily involves a margin of discretion in the assessment."<sup>26</sup> Besides being potentially considered selective, such measure awarded in a non-transparent procedure cannot stand the test of to market economy operator and its decision (valuation) – making process in a similar situation. Would a (private) market economy operator, facing the similar situation, do the same as State? If not, why has the State decided to act differently and on what grounds? Potential consequences are financially, socially and market-wise enormous. Introducing concrete criteria such as risk assessment, debt accountability and creditor consent, MEO principle elements and making the process more transparent in advance, would provide the State with a strong legal shield against its own (wrong) doing.

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<sup>25</sup> Marco Botta, State Aid Control in South-East Europe: The Endless Transition, ESAL 1 2013

<sup>26</sup> Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union, C/2016/2946, OJ C 262, 19.7.2016, p. 1–50

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## PASSENGER AIR TRANSPORT IN THE INTEGRATION OF THE BALTIC SEA REGION

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### **ABSTRACT**

*The Baltic Sea Region is an EU macroregion where intense integration processes take place. Integration priorities and policies are set out by the European Union Strategy for the Baltic Sea Region. The document recognised "connectivity" as one of the three primary objectives, while transport development as one of the 13 specific objectives. The main element of this region is the sea basin which is a physical barrier for integration processes. Overcoming this barrier is a challenge for the transport system, in particular for the air transport. This paper analyses the key factors of this system. Literature research was conducted. The Region was delimited, taking into account both state borders and borders of NUTS 2 statistical regions situated at the Baltic Sea. Based on cutting-edge IT tools (Skyscanner and Flightradar), airports which serve passenger traffic in this region were identified. Measures of air infrastructure development as well as air transport and price accessibility were prepared. Next, empirical research on this issue was conducted. The Region, which has an area of 3,839.8 km<sup>2</sup> and a population of 107.51 m., has 163 airports that serve 983 intra-regional air operations. The highest number of operations was noted in capital airports in Scandinavian countries (Stockholm, Oslo, Helsinki, Copenhagen). As regards measures of air operations and measures of air infrastructure development, a wide disparity between the well-developed Scandinavian countries and the other part of the Region was observed. Analysis of price accessibility of air services gave different results. Scandinavian countries together with Belarus and Russia proved to have unfavourable price accessibility. Kaliningrad had the most expensive and worst connectivity among Baltic airports. Out of airports not situated in capitals, the Gdańsk airport had the best connectivity. As regards the development of the passenger air transport system, the integration of the Baltic Sea Region was found to be good.*

**Keywords:** *Baltic, region, integration, transport, airports*

### **1. INTRODUCTION**

An increasing number of researchers from various academic disciplines are becoming interested in air transport. The relations between air transport and the new type of integration, i.e. EU macroregional integration, must be analysed in the context of new integration processes. This paper examines this research problem. The Baltic Sea Region (BSR), the oldest macroregion, has been analysed. In the context of EU coherence policy, the analysed area has been delimited spatially. The aim of this paper is to answer the following questions:

1. What is the level of development of air transport infrastructure in the BSR countries?
2. What is the level of air mobility of the BSR countries?
3. What is the price accessibility of air services in this Region?
4. What is the level of integration of the BSR countries in the Region in terms of air transport?

Literature research has explained the nature and specific character of air infrastructure. The measures that were used enable to conduct a comparative analysis of air infrastructure



development. The condition of operations of airports serving passenger traffic has been evaluated by using modern online tools such as Flightradar and Skyscanner. A comparative analysis has been conducted based on the selected measures; it covered the development of air infrastructure, the network of flight connections and the price accessibility of air services in the Region. Analysis of the network of flight connections has been conducted based on all flight connections over a specified period. Analysis of price accessibility has been carried out based on the cheapest direct connections, or indirect connections if there are no direct ones. The method used in this paper is one of many possible. It is a contribution to the improvement of research methods and to further more in-depth research.

## 2. MACROREGIONAL INTEGRATION OF THE BALTIC SEA REGION (BSR)

The Baltic Sea Region (fig. 1) is a transnational area with many years of intense cooperation which integrates Baltic nations and countries (Walter, 1998, p. 48; Studzieniecki, 2016, p. 236; Kizielewicz, 2012, p. 28).



Figure 1: Area of the Baltic Sea Region (INTERREG Baltic Sea Region, 2017)

However, at the crossroads between East and West, North and South, the Region has long been marked by cultural, ethnical and ideological borders. Overcoming a history of conflict and separation, since the end of the Cold War the countries surrounding the Baltic Sea established widely valued formats of regional cooperation based on shared challenges and opportunities (Henningsen, Etzold, Hanne, 2017, p. 8; Urbanyi-Popiolek, 2012, p. 343; Spodarczyk, Szelagowska- Rudzka, 2015, p. 437). The Baltic Sea Region is, unfortunately, highly diverse in terms of economy and society (Fedorov, Mikhaylov, Kuznetsova, 2017, p. 7). As a result of the accession of Poland and the Baltic Republics to the European Union in 2004, the Baltic Sea became an EU internal sea. The Baltic Sea Region consists of 11 countries, including 8 EU member states. Noticing the Region's potential that resulted from many years of cooperation and intending to reduce the differences between the Baltic countries, the European Union prepared and implemented the EU Strategy for the Baltic Sea Region in 2009. The macroregional strategy became a macroregional integration tool for the Baltic Sea Region. The integration was based on the concept of Corporate Social Responsibility focused on building relationships in support of all stakeholders involved in cooperation (Wolska, Kizielewicz, 2015, p. 143). One of the priorities of this strategy was to develop transport infrastructure and increase intraregional transport connections (Hogeforster, 2012, p. 50). Literature research has shown

that transport is one of the most important factors of regional integration (Peschel, 1999, p. 2). It contributes to the establishment of close interregional relations (Gadelshinaa, Vakhitova, 2015, p. 247). Transport facilitates the development of connections between regions within a country and between countries, and consequently, it supports the formation of mutual economic, social, cultural relations (Skorobogatova, Kuzmina-Merlino, 2017, p. 321). "This importance of mobility applies to the Baltic Sea Region, where a good, accessible transportation system is a key factor for the continued positive development of this region" (Baltic Bird, 2014). Out of the transport branches that contribute to regional integration, air transport is playing an increasingly bigger role (Hawlana, 2012, p. 761; Staniland, 2008, p. 20; Trzepacz, 2016, p. 31). The project "Baltic Bird" played an important role in the development of transport and the improvement of cooperation between entities in the BSR air market (2014).

*Figure 2: Blue Bird's logotype (Blue Bird, 2014)*



It was an INTERREG IV B BSR project, co-financed by the European Union within the Baltic Sea Region Programme 2007-2013. The project, with an overall budget of 2.9 million euros, brought together 21 partners and 13 associated organisations from the Baltic Sea Region. The general objectives of project were to improve the airside accessibility of the peripheral Baltic Sea Region and the intermodal interconnectivity of regional airports to increase socio-economic cohesion as well as to strengthen economic growth, and ecological sustainability. Despite the unquestionable benefits of the project in macroregional integration, a mechanism for cooperation that would cover all, not only some of the entities in the BSR air market, has not been created. The project, however, enabled to evaluate the condition and establish directions for air transport development in the Region.

### **3. AIR TRANSPORT INFRASTRUCTURE**

Development of each transport branch requires an efficient infrastructure (Schuckmann, et al. 2002, p. 1373; Przybyłowski, 2011, p. 101) because infrastructure is the base of the transport system (Pyza, 2010, p. 113; Skorobogatova, Kuzmina-Merlino, 2017, p. 321). There are many interpretations and typologies of infrastructure. The broadest view divides infrastructure into soft (institutions) and hard (installations and structures) ([Macchi, Sequeira, 2009, p. 70). Infrastructure is also divided into technical and social (Kapusta, 2012. p. 315). Infrastructure can also be classified by the type of social and business activity. Transport-related activity involves transport infrastructure. The primary objective of this infrastructure is to transport people and cargo (Tarski 1973, p. 11). The term "transport infrastructure" evolved along with the social and economic development as well as scientific and technical advances (Ratajczak, 2000, p. 83). EEC Regulation (No 1108/70) of 1970 defines transport infrastructure as "all routes and fixed installations of the three modes of transport being routes and installations necessary for the circulation and safety of traffic". But as the transeuropean transport network was developed, the definitions were modified (Regulation (EU) no 1316/2013]). Six elements of transport infrastructure were identified: rail transport infrastructure, inland water transport, road transport, sea transport, air transport and multimodal transport. A separate definition of transport infrastructure was added to each element. There were three types of infrastructure in each case: linear, nodal, and additional (fig. 3).

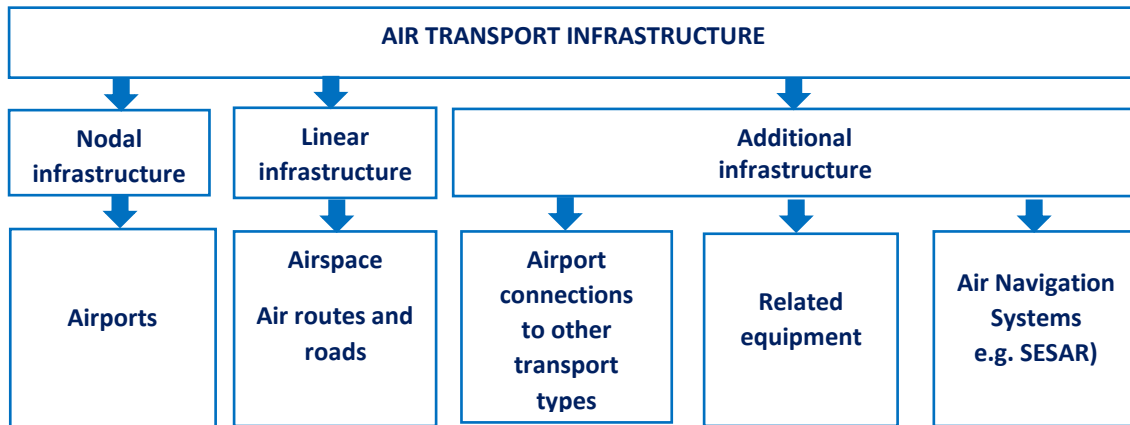


Figure 3: Classification of air transport infrastructure (own work based on Regulation (EU) no 1316/2013)

Macroregional integration is implemented through international passenger traffic, including tourist traffic (Wanagos 2000, p. 233; Wanagos, 2009, p. 587). Airports are important in serving international passenger traffic in sea regions. Their task is to provide and maintain the infrastructure necessary for planes to land, take off, stop and park as well as to provide connections between passengers arriving at the airport by different modes of transport and the access to the plane (Barcik and Czech 2010, p. 5). The airport is the most developed separated area for taking off and landing from the point of view of passenger transport (fig. 4). It is a public airport used for commercial purposes.

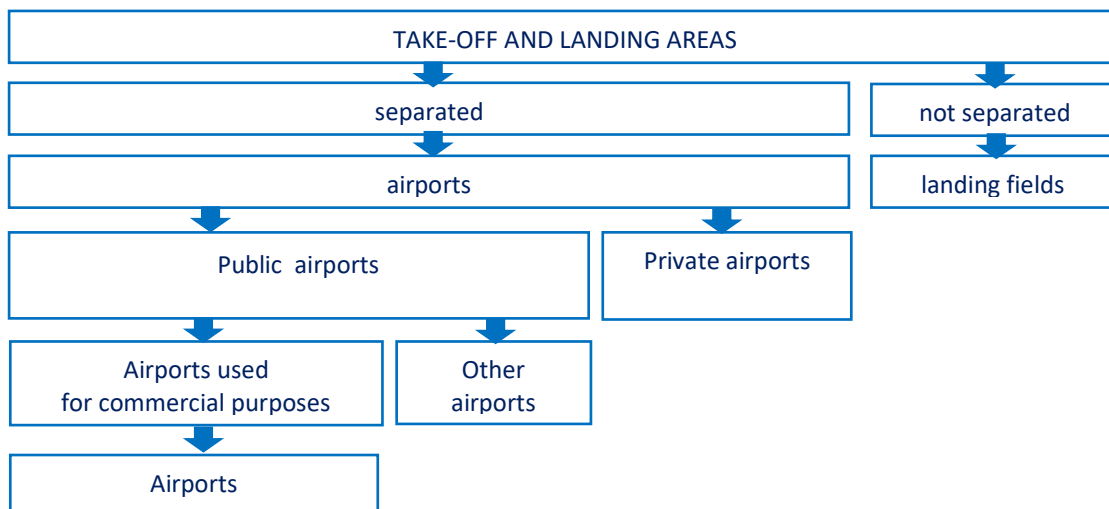


Figure 4: Classification of take-off and landing areas (own work based on ULC, 2017)

An important factor that determines the development of the air transport market is airport capacity. It determines the efficiency of these transport points to serve a specific number of passengers and cargo (Ruciński, Madej, 2016, p. 29). The capacity of some BSR airports reaches nearly 100%, which – taking into account the favourable forecasts for air transport development – makes it necessary to enlarge these airports or build new ones (Blue Bird, 2014).

#### 4. AIRPORTS IN THE BALTIC SEA REGION

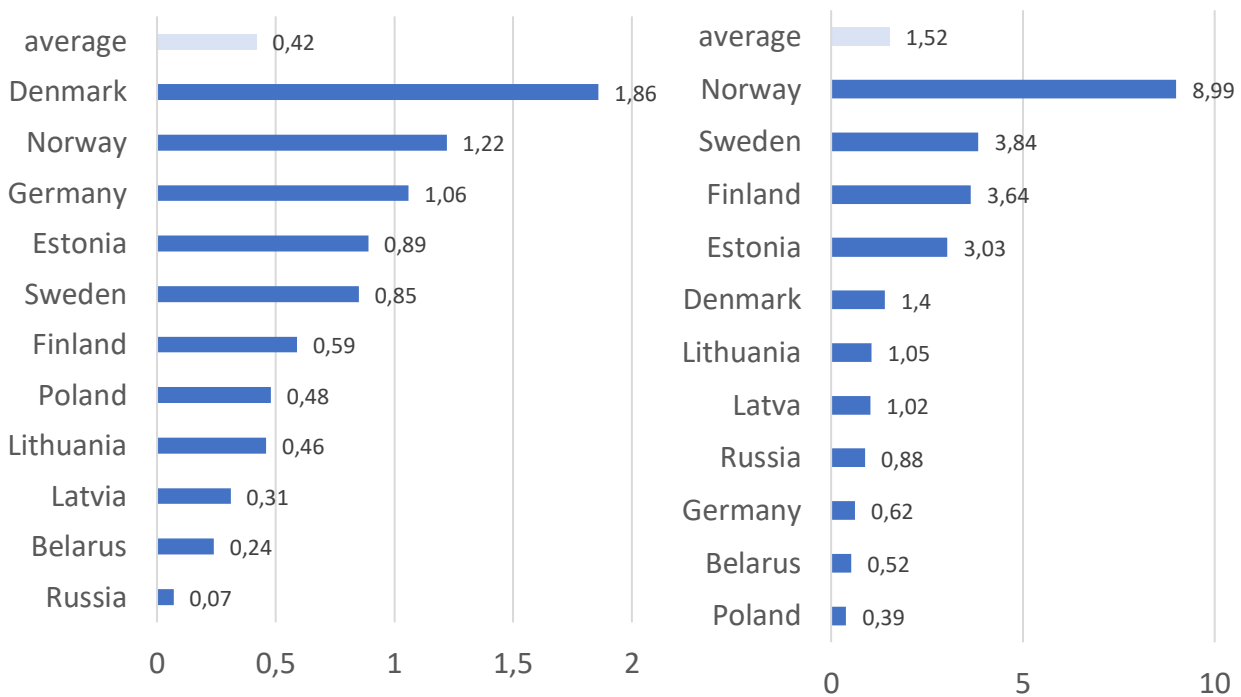
The Baltic Sea Region, which is analysed in this paper, stretches over 3839.8 thousand km sq. It is populated by 107.51 million people. In 2017, there are 163 airports serving passenger traffic

in this area. The highest number of airports is in the Scandinavian countries (except for Denmark), and the smallest number is in the Baltic Republics (table 1).

*Table 1: Indicators of the Baltic Sea Region air infrastructure  
 (own work based on Flightradar24.com, 2017; The World Bank, 2017)*

No.	Country	Number of airports	Country area	Population	Number of airports /10 000 km sq	Number of airports /1 million people
1.	Poland	15	312.7	37.9	0.48	0.39
2.	Germany	8	75.9	12.88	1.06	0.62
3.	Denmark	8	43.0	5.73	1.86	1.40
4.	Sweden	38	447.4	9.90	0.85	3.84
5.	Norway	47	385.2	5.23	1.22	8.99
6.	Finland	20	338.4	5.49	0.59	3.64
7.	Estonia	4	45.2	1.32	0.89	3.03
8.	Latvia	2	64.5	1.96	0.31	1.02
9.	Lithuania	3	65.3	2.87	0.46	1.05
10.	Russia	13	1,854.6	14.73	0.07	0.88
11.	Belarus	5	207.6	9.50	0.24	0.52
12.	<b>IN TOTAL</b>	<b>163</b>	<b>3839.8</b>	<b>107.51</b>	<b>0.42</b>	<b>1.52</b>

The number of airports serving passenger traffic and located in a given country is an insufficient indicator to assess the development of air infrastructure. Therefore supplemental indicators that take into account the area and population of these countries should be added. According to the authors, such indicators are: the number of airports per 10,000 km sq and the number of airports per 1 million citizens.



*Figure 5: Number of airports in the BSR in 2017 per 10,000 km sq (source: own work based on (Flightradar24.com, 2017; The World Bank, 2017)*

*Figure 6: Number of BSR airports in 2017 per 1 million citizens (source: own work based on (Flightradar24.com, 2017; The World Bank, 2017)*

Statistically, there is 0.42 pilot per 10,000 km sq in the BSR. There are 1.52 airports per 1 million BSR citizens. Both these indicators show the diversity between the Scandinavian countries and the countries located at the southern Baltic. The highest level of air infrastructure is in Norway and the lowest in Belarus.

## 5. AIR MOBILITY OF THE BSR COUNTRIES

When analysing the BSR countries by the number of served passengers, it turns out that the achievements of these countries are average. These achievements gain a new dimension when they are compared with the demographic potential of these countries. The indicator of air mobility is used for this purpose, it is the ratio of served passengers to the number of citizens (Trzepacz, 2016, p. 31). The BSR leader, both in terms of the number of served passengers and air mobility, is Norway. Other Scandinavian countries also rank high. Theoretically, German airports serve the highest number of passengers. But this applies to the entire country, not the part that belongs to the BSR. Russia and Belarus have not been analysed because it was difficult to obtain data.

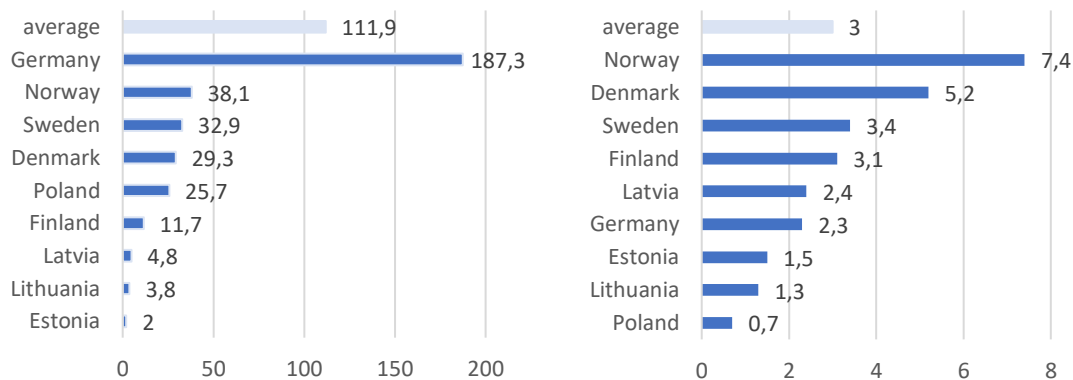


Figure 7: Number of passengers in the BSR airports in 2014  
 (source: own work based on Trzepacz, 2016).

Figure 8: Air mobility of the BSR countries in 2014  
 (source: own work based on Trzepacz, 2016).

## 6. THE NETWORK OF AIR CONNECTIONS

In 2017 the BSR airports served 983 connections in total. This means that statistically each airport served 6.03 connections. However, it must be emphasised that the majority of these airports, i.e. 125 (77.69%) served no more than 6 connections, so below the average. This group includes 6 airports (3.68%) that had no connection. Thirty-five airports (23.73%) had only 1 connection. Twenty-nine airports (17.79%) had 2 connections. Twenty-two airports (13.49%) had 3 connections. Twelve airports (7.36%) had 4 connections. Eleven airports (6.75%) had 5 connections. Nine airports (5.52 %) had 6 connections. Airports located in Norway and Sweden served 533 connections in total. This accounts for 54% of all connections.

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26th International Scientific Conference on Economic and Social Development –  
 "Building Resilient Society" – Zagreb, Croatia, 8-9 December 2017

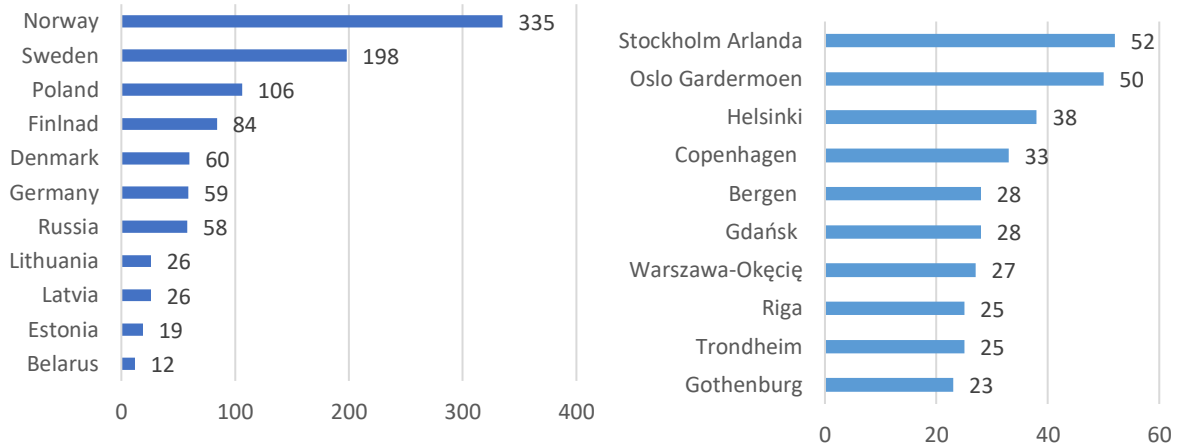


Figure 9: Number of intraregional air connections in the BSR countries

Figure 10: BSR airports with the highest number of connections

The highest number of air connections was served by airports located in Scandinavian capital cities (Stockholm, Oslo Helsinki and Copenhagen). The high rank of Poland, is noteworthy. The airports which are not located in capital cities and which serve the highest number of connections are: Gdańsk (Poland) and Bergen (Norway). The geographical structure of the connections of these airports varies greatly (Figure 11, Figure 12).

Figure 11: Structure of the connections of Gdańsk airport (Poland)

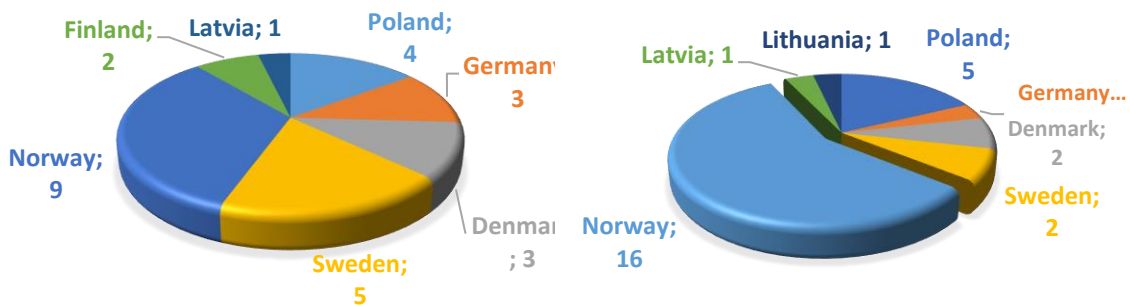


Figure 12: Air structure of Bergen airport (Norway)

Gdańsk airport is considerably more internationalised. Over 85% of its connections are international, including 50% to Norway and Sweden. In contrast, Bergen airport focuses mainly on national connections (57.14%). Most of the external connections of Bergen airport are connections to Poland. Copenhagen airport is the biggest airport in the Baltic Sea Region. Every year it serves over 29 million passengers (Copenhagen Airport, 2017). However, it is ranked only 4th on the list of airports serving connections in the Baltic Sea Region. Out of these 11 countries, 7 had connections to all 10 neighbours. Three countries had connections to all the states except for Belarus. This means that Belarus had connections only to 7 countries.

## 7. PRICE ACCESSIBILITY OF AIR CONNECTIONS

The prices of air connections in the BSR varied a lot (table 2). The air connections between EU airports and Norway were relatively cheap. In contrast, the most expensive connections were to Russia and Belarus (Figure 13).



Table 2 Price accessibility of air services in the BSR in 2017 (Skyscanner, 2017)

PL	DE	DK	SE	NO	FI	EE	RU	BY	LV	LT	
PL	X	34	42	20	20	117	251	341	239	171	238
DE	34	X	86	43	139	85	64	344	324	64	73
DK	50	137	X	154	106	164	233	364	452	87	42
SE	19	43	197	X	162	127	186	264	294	114	43
NO	20	149	116	133	X	112	134	381	506	64	64
FI	75	85	176	121	179	X	234	324	304	214	217
EE	308	64	297	209	175	434	X	305	329	112	176
RU	425	400	419	320	476	329	341	X	266	341	324
BY	438	489	535	486	414	417	281	264	X	324	170
LV	153	64	124	146	64	234	117	346	316	X	86
LT	139	63	42	43	64	238	175	341	170	86	X

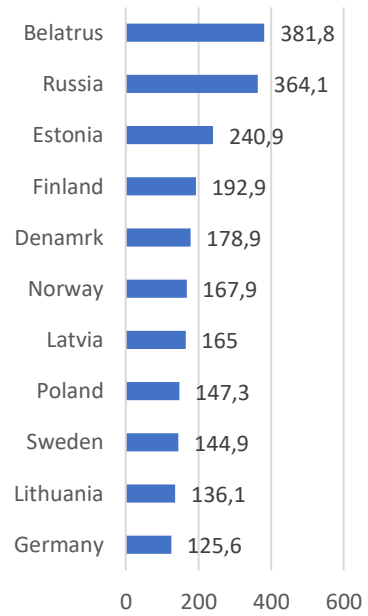


Figure 13: Average cost of intraregional connections in the BSR countries in 2017

The air connections between EU airports and Norway were relatively cheap. In contrast, the most expensive connections were to Russia and Belarus. The cheapest connections were from Poland to Norway and Sweden. Statistically, the price accessibility of EU and Norwegian air transport was rather balanced. Russia and Belarus were the most expensive countries. This mainly results from the fact that the most popular low-cost carriers did not operate in these countries. Furthermore, due to high costs of visas and related formalities (vouchers, agency services, insurance) the supply decreased and, as a result, the prices increased.

## 8. CONCLUSIONS.

The research on the BSR air transport encountered numerous barriers related to data access. International air transport organisations are an important source of information on air infrastructure. The key role is played by ICAO (International Civil Aviation Organization). It has 191 member states [ICAO 2017], including all BSR countries. Its task is to prepare and implement international provisions regulating air traffic security and the air transport industry. It must be pointed out that ICAO keeps a register of airports, but it does not make the data relating to the air passenger traffic served over a specific period available. It is challenging to identify all airports serving air traffic in a specific moment. The method used by the authors enables to analyse the linear and nodal infrastructure of air transport operating in the Region only in a specific moment. But it does not identify the development trends from previous years. Based on all these indicators, it has been shown that the BSR air infrastructure is very diverse. It is well-developed in the Scandinavian countries. A distinctive feature of the Scandinavian countries is also a higher mobility than their neighbours. Due to the geographical location, their airports are less internationalised than the airports of the southern Baltic countries. The network of air connections enables to integrate the BSR countries almost completely. Russia and Belarus are in a less favourable position. They have the lowest number of connections to their neighbours, but they also have the most expensive air transport services. These countries are not members of the European Union or the Schengen Area so they are much less integrated in terms of air passenger transport.

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## CHALLENGES OF THE EUROPEAN UNION AFTER BREXIT

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### **ABSTRACT**

*The symbiotic action of the EU members proved to be a successful model for preserving general well-being and security. Through the evolutionary process, changing the way of functioning, the European Union has gradually evolved into a powerful integration in transition between an international organization and a transnational community promoting peace, preserving freedom, security and justice without internal frontiers, establishing the Internal Market and promoting sustainable development while promoting economic, social and territorial cohesion. However, the current withdrawal of the United Kingdom from the European Union has created an atmosphere of insecurity and skepticism that has gradually shifted to aversion over the prevailing policy and all levels of European institutions. In this respect, the accession countries of the European Union have been particularly vulnerable, which have begun to re-examine the relevance of the European project in new circumstances and consequently to formulate priorities dictating the pace of the reform of harmonization. In accordance with the above mentioned issue, the purpose of this paper is to examine the challenges of the European Union after the process of breaking up with the United Kingdom. Approach to European integration as a subject of research in this paper has been holistic, and its complexity has undergone qualitative research, starting with defined research goals. Thus, the implications of Brexit on the acceding countries of the European Union were analyzed and the relevance of the current EU model of functioning after Brexit was examined. The results of the research have shown that Brexit is the occasion for a deep analysis of the principles of action of the European Union, which, faced with new challenges, must be adaptive and ready for new changes. At the same time, the results confirmed the need to continue the enlargement of the European Union to the accession countries, regardless of Brexit. The results of this research can contribute to the advancement of existing knowledge and wider understanding of the European integration phenomena and the policy of its expansion at a contemporary moment.*

**Keywords:** *Brexit, EU accession countries, EU model of functioning, European integration, Policy of enlargement*

### **1. INTRODUCTION**

The recent withdrawal of the United Kingdom from the European Union for the first time in history brings European integration backwards, bringing both sides into an unprecedented situation, conditioning the development of completely new relationships. Such a scenario takes place at a sensitive time (Jurčić, 2016, p. 605), when the world environment faces a slowdown in economic growth and international trade, deflationary pressures, migratory crises and political tensions, slowing down integration processes and intensifying national sentiments. The latter sparked in June 2016, in the United Kingdom, when the majority of the constituents were guided by arguments on political sovereignty, the strengthening of the economy and the control of immigration processes in the country, in which they expressed the desire to leave the European Union. A political project and a media campaign with the symbolic name Brexit soon developed. The available papers on Brexit's influence on the European Union and its expansion policy approach this phenomenon with caution and skepticism. Capeta (2016) pessimistically anticipates the scenario of future European integration processes. In his work he looks at the effects of Brexit on European integration, and as the biggest victim of the United Kingdom's withdrawal process, he suggests the European Union itself with its entire legal system. Crafts

(2017, p. 17) is cautious in predicting the re-emergence of the European Union, finding that such a scenario is completely unimaginable. Galbraith as well agrees (2016, p. 1) that the future of the European Union is unsafe, and considers that the outcome of Brexit depends heavily on British politics, EU legal regulations, but also on the external forces. In accordance with the above mentioned issue, the purpose of this research is to examine the challenges of the European Union after Brexit. European integration processes in this paper were approached in a holistic manner, as a whole phenomenon in its complexity, starting from the developed research goals:

- To analyze the implications of Brexit on the accession countries of the European Union.
- To investigate the relevance of the current EU model of functioning after Brexit.

The paper is organized in a way that an analysis of fundamental concepts, based on previous research, is provided after the introduction. Determination of facts of the contemporary moment from the perspective of the European Union follows, and a discussion of the future of its enlargement in the wider context of European integration processes. The work ends with a discussion.

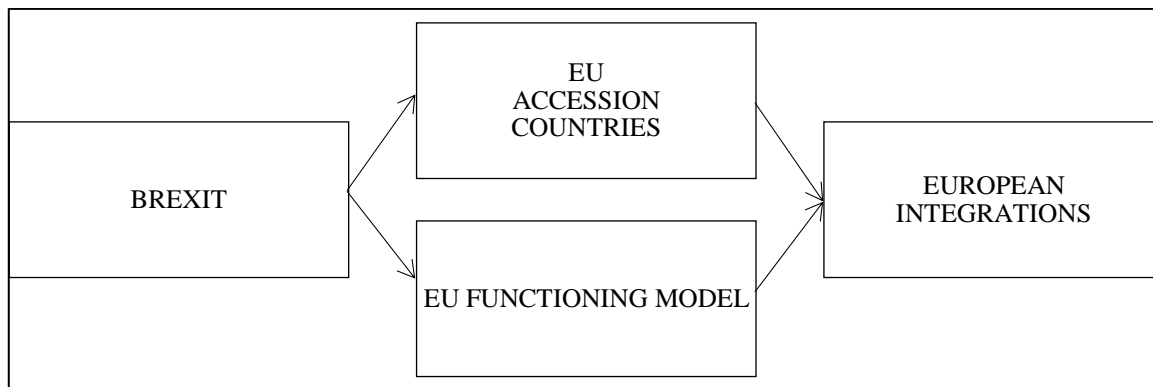
## 2. LITERATURE REVIEW

New scientific concepts point to the plurality of approaches in the scope of defining the concept of European integration. Tršinski (2015) explains them from a broader point of view, saying that with European integration theorists, only the studies studying the phenomenon of Europeanization marked a step forward in the interpretation of the effects of the European Union on the national policies of member states. The extension is a comprehensive and often quoted definition of the concept of Europeanization given by Ladrech (1994, p. 69), defining it as "an incremental process of reorientation of direction and policy towards the degree to which the political and economic dynamics of the European Union become part of the organizational logic of national policies". Kandžija and Cvečić (2010, p.4) lower the concept of European integration to the level of a process, clearly and comprehensively defining them as a process of institutional, economic and political cooperation and integration on the European continent. In this regard, it is obvious that the process of European integration rests on compliance with the set of criteria, negotiating guidelines and regulatory adaptation, which together constitute the basic elements and steps of the composite expansion policy. Current and available publications (Hastings Dunn and Webber, 2016; Dhingra, Ottaviano, Sampson and Van Reen, 2016; Oliver and Williams, 2016; Jackson, Akhtal and Mix, 2016; Chapa, 2016; Hawkins, 2016; Mulabdic, Osnago and Routes, 2017; and others) are largely observing the effects of Brexit on the United Kingdom, while works evaluating its effects on the EU enlargement perspective are available to a lesser extent (Börzel, Dimitrova and Schimmelfennig, 2017; Matthijas, 2017; Cremades and Novak, 2017; Crafts, 2016; Galbraith, 2016; Kostovicova, 2016, and others). Matthies (2017) points out that the economic and political crisis has almost brought the European Union to a break-up, despite the Union leaders' assumptions that shocks contribute to further and deeper integration. Therefore, Matthies (2017, p. 95) warns of the need to take control over the process of European integration, which today, more than ever, needs a new working agreement, sixty years after the Treaty of Rome. Kyriazis and Economou (2017) believe that in the medium term, European integration can become stronger and more consistent than ever before and highlight cohesion as one of the prerequisites for long-term sustainability. With the expected certainty that the European Union will survive the current crisis, Lord (2017, p. 17) predicts that the Union will integrate deeper and faster in the future. On the other hand, Crafts (2017) states that European integration is no longer powerful and warns that its expansion is threatened by Euroscepticism and Populism.

Taking the opinions of current theorists into consideration, a study was carried out on the perspectives of the enlargement of the European Union and the relevance of the current model of functioning after Brexit. A qualitative approach follows the achievement of developed research goals, with which it was intended to get into the core of the problem by placing research subjects in the spatial, temporal and social context, taking into account its dynamics.

### 3. METHODOLOGY

In this research, European integration processes are viewed as a dynamic and complex entity composed of multiple forces. In order to deepen and broaden the knowledge of the observed phenomenon, the potential effects of Brexit on European integration processes and the structure and rules governing them are examined. For the purpose of holistic analysis and acquisition of a complete insight into the subject of research, a simple qualitative design was developed serving as the basis for the formation of the cognitive process. The draft was simultaneously used as a conceptual model for critical study of subject matter, understanding of the course of events, and the development of causal explanations.



*Scheme 1: Conceptual Model of Research (Author's Creation)*

The conceptual model examines the impact of Brexit on European integrations, by acting through the effects that are left in the central parts of the model. Thus, the cognitive process is manifested by monitoring the effects of Brexit on the accession countries of the European Union and by monitoring the effects of Brexit on the current model of functioning. The Model examines whether Brexit affects the perspective of the enlargement of the European Union by impacting these segments.

### 4. RESEARCH RESULTS

The challenges of the European Union were presented within the framework of the research results. The first part presents the implications of Brexit on the accession countries of the European Union, followed by an analysis of the relevance of the EU model of functioning after Brexit.

#### 4.1. The implications of Brexit on accession countries to the European Union

The question of enlargement of the European Union has almost always confronted the views of European political elites. For admission opponents, new members represented a potential problem due to the large number of minorities and the fear of migration. At the same time, a clear view is voiced about the high costs of receiving eastern European countries before their economic institutions are able to compete on the EU internal market, because of which an adaptation of transitional countries in two steps was implemented: first by joining in preparation, and then by membership itself. On the other hand, admission receivers have highlighted multiple benefits that are generated by the enlargement of the European Union.

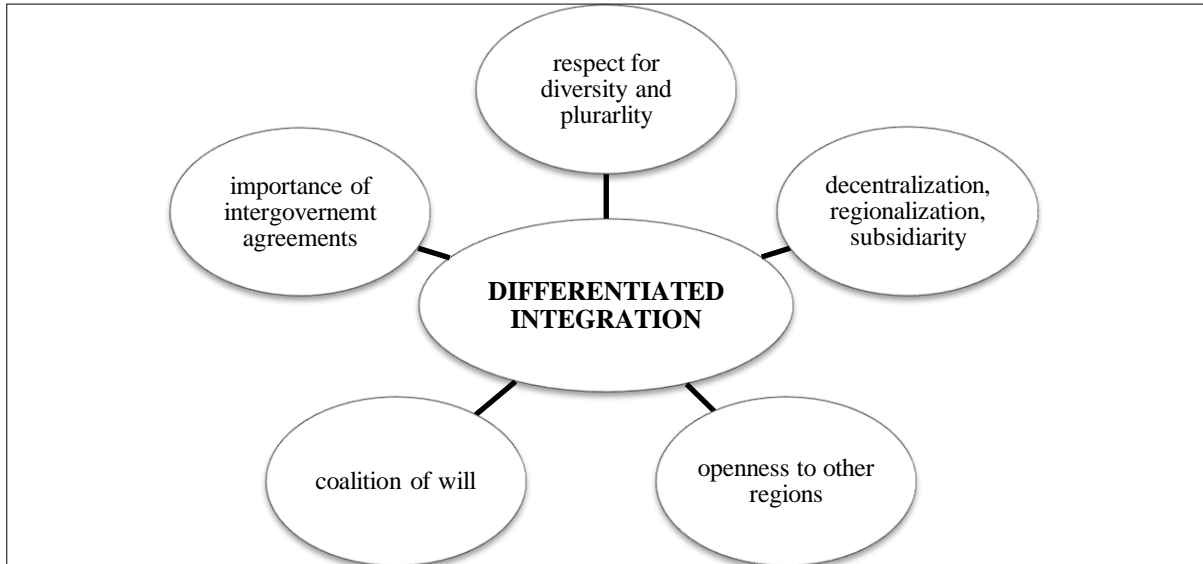
With the accession of new countries to full membership, the Union achieves the goals of increasing security, stability and prosperity on the European continent (Kandžija, Kandžija and Tolić, 2017, p. 27). It is indisputable that the European integrations brought peace and prosperity and enabled close co-operation on issues of mutual interest. In order to maintain the symbiosis of its members, the European Union has responded to Brexit with perseverance, in the realization of its goals, in particular by preserving the interests of the European Union and its citizens, companies and all countries in integration. In this context, the European Council's Guidelines (Article 50) for the negotiations on Brexit (Council Secretariat-General, 2017) state that the Union will remain united during the negotiations and will act in order to achieve fair and equitable results for all Member States, which is in the interest of all its inhabitants. As one of the newer policies of the Union, which is at the same time part of all other Community policies of the European Union, the policy of enlargement is constantly changing and following the general trends of the Union, its members, and accession countries. Today, the process of meeting the specific requirements and transmitting (i.e. integrating) the EU legislation into national law lies with Western Balkan countries (Albania, Macedonia, Montenegro and Serbia) and Turkey, while Bosnia and Herzegovina and Kosovo are currently potential candidates, with still unfulfilled membership requirements. The fact is that the Western Balkans countries lag behind the development levels of the EU member states. An extensive process of thorough structural reforms is underway, which will enable them to adapt their economies to more developed economic systems in the Union. In other words, the authors Kandžija, Kandžija and Tolić (2017, p. 29) indicate that the mentioned countries have to achieve convergence, which will result in cohesion. In this regard, the concept of real convergence in these countries implies cushioning the level of economic development of the EU average, and completing the transition process and related structural reforms, thus making these transitional economies more similar to other countries of the Union. (Kandžija, Kandžija and Tolić, 2017, p. 34). Research evidence from the before mentioned authors suggests that the Western Balkan countries are demanding a period of reform if they keep their aspirations towards European integration. However, there are also different opinions, which say that the aspiration of these countries to integrate after Brexit has become questionable. Stratulat (2016, p. 2) thinks that interest in the integration falls in the group of accession countries, given that the United Kingdom has got out of the Union. At the same time, the author warns of the possibility that the British are being tactical by helping the countries of the Western Balkans join the Union for no other reason but to sabotage the integration project by increasing the number of "their own players". Therefore, in order to preserve and minimize such scenarios, the European Union should devise new instruments within the EU Expansion Tool, or possibly review a new approach for the Western Balkan countries. The question is: did Brexit have doubts about the success of the European Union project, encouraging a dilemma about the continuation of the accession process? The above mentioned question should be considered comprehensively. In this respect, it should be emphasized that Brexit is a completely separate dimension in relation to the complex process of integrating Western Balkan countries. The development levels of the countries of the Western Balkans and the United Kingdom are unparalleled, suggesting that the model of future cooperation between the United Kingdom and the European Union as a result of the current negotiation process was difficult to apply in the Western Balkan countries. Faced with the consequences of political turbulence, slow economic growth, and high unemployment rates, the Western Balkans are not strong enough to be "independent market players" and undoubtedly need the help of the European Union. By meeting political, legal, economic and administrative criteria, they will, among other things, be able to use the means of European funds, thereby strengthening their positions while building their systems, institutions and societies in the direction of European values.

However, the benefits of integration are not limited to the countries of the Western Balkans. The expansion is in the best interest of all member states, giving new energy to stronger integration within the Union (Mišćević, 2016, p. 144). Significant support to the argument that the expansion can help further development of EU integration, primarily through the elements of convergence, is the 2014 Strategic Agenda for the Union in the Time of Change, describing the expansion as a response to the crisis situation in the Union. The Agenda is based on the analysis of economic effects of the expansion, presented in the 2008 European Commission report, which sees the expansion as a step towards unification of the stronger and more culturally rich Europe. Although the expansion carries with it the risk to the balance of the European Union, the Union is by nature a project based on values, not just standards (Sjursen, 2006, p. 203). In fact, for the Union and its members, it has always been a priority to extend the values of peace, stability and democracy to as many states as possible, and gather to them together. Therefore, it should not be forgotten that the European Union is above all a peace alliance, where diversity of nations represents its greatest strength.

#### **4.2. Relevance of the functioning model after Brexit**

Many authors believe that it is impossible to maintain the prospect of further European integrations in the near future, largely because of the heterogeneous socio-demographic nature of the members of the European Union. Wahl (2016, p. 3) points out that the differences between highly developed Western and Northern European economies, and the Eastern and Southern Europe, in economic and social indicators, are extremely big, and only unrealistically high transfers from more developed countries can overcome them. In this respect, Artus (2012) calculates that the more developed countries have to pay between 8 and 12% of their annual GDP for at least a decade to bridge the gap. In accordance to this, the adequacy of the existing model of functioning has become the subject of debate between theorists of economic integrations, who have recently questioned the integration model with the elements of differentiation, with the aim of defining the optimal criteria for the allocation of powers between the centralized and decentralized levels of government. Debates focus on the costs and benefits of centralization in comparison to decentralization. While, on the one hand, the cost of centralizing at the Union level lies in the fact that it imposes the same decision to countries which may have different national preferences, decentralization, on the other hand, enables implementation of different policy choices according to different national and / or local preferences. Perhaps the model of differentiated integration is the alternative for the future of European integrations. Chopin and Lequesne (2016, p. 531) define differentiated integration as a process that enables some members of the European Union to integrate deeper, while at the same time it allows other members of the Union to be excluded from following the same direction. The model implies a simple construction. A solid nucleus occupies the center, or a central circle that consists of members willing to integrate deeper, and the second circle of members lean to it, developing relationships based on special contracts with the countries of the first round. This model implies multiple benefits.

*Figure following on the next page*



*Scheme 2: Benefits of Differentiated Integration (Author's Creation)*

The strength of the new model of functioning is based on respect for diversity and plurality and in the interest of international co-operation in areas of interest. Noelke (2013, p. 7) explains the new model as a mix of selective integration and disintegration, organized by principles such as decentralization, regionalization and subsidiarity, for the purpose of sustainable internal development of the Union. Wahl (2016, p. 5) believes that the new model would mean more openness to the outside world, especially towards neighboring regions such as North Africa, the Middle East, Russia and the Balkan countries. The participation of member states would be based on the idea of variable geometry, or coalition of wills. For example, states that want to cooperate in areas of mutual interest can do so without the blockage of other members that do not participate. This procedure could be applied to all areas of activity of the European Union. Differentiated integration would also interrupt the dependence path of neoliberal constitutionalism (Wahl, 2016, p. 5). In essence, this would mean reducing supranational components and replacing them with specific intergovernmental agreements. Joint institutions could facilitate Agreements, which means that institutions in Brussels could continue to exist, but with the emphasis on servicing and supporting the member states. Consequently, there would be a reduction in the supranational component of the Union, which in particular means a weakening of the ECB's strength and the European Court of Justice. It should be emphasized that differentiated integration becomes less exotic by pointing to its forms that have long existed on European soil. An example is the division of Europe into the Eurozone and the non-Eurozone, as well as the Schengen Agreement. In addition, there are a number of national practices that are integrated by the degree of differentiation, and by their close linkage they make integral subregions within the EU integration. Thus, for example, the national elites of the United Kingdom, Denmark and Sweden, connected through the Anglo-Scandinavian line, gathered to operate in the common market and to better integrate their economy in Europe in the exchange of goods, services and capital. Among the political elites of the three countries, as a centralized policy every perception of the European Union has always been marginal, while national sovereignty and national models have always remained a high priority. In summary, most politicians in all three countries support differentiation as a pragmatic way of participating in the European Union (Chopin, Lequesne, 2016, p. 534). The co-operation of Poland, the Czech Republic, Slovakia and Hungary in the Visegrad group is another such case. Although members of the European Union, these countries do not participate in all of its policies because they do not respect certain formal criteria set out in the EU Treaties. The vision of this

association of the former socialist Central European countries was based on the protection of common economic interests, and the promotion of free trade, development of transportation infrastructure and energy-based cooperation, with the aim of facilitating the transition to the market economy. However, the political component has never been particularly emphasized, and cooperation has been achieved through the communication of countries at all levels of government. It should be noted that the United Kingdom has a significant influence on the activities of the Visegrad Group, and their most important political consultant is London. Three of the four countries of Visegrad did not adopt the euro as a national currency, as the result of the British influence. It is a significant detail that indicates that the alliance is structured in a way that allows a high level of autonomy to its members, yet does not disturb the functioning of the European Union in general. Although it is clear that the „Europe in several gears" model (made up of solid core and concentric circles) is not fully compatible with the original idea of equal nations acting on a single market, it seems to be an alternative that will prevent disintegration. Differentiated integration remains, in this respect, the key and only possible principle, giving the member country the choice of integrating deeper than others, for example in areas of defense, internal security or social policy. The fact is that differentiated integration means farewell to the purpose of approaching, and stronger links within the European community, but it is also an optimal solution for stopping the uncontrollable process of European erosion.

## **5. DISCUSSION AND CONCLUSION**

This paper discusses the multidimensional challenges of the political, economic and identity spheres it faces, starting from the spatial, temporal and social context in which the European Union is located. The future of the European integrations processes is analyzed, potentially determined by Brexit with effects in two areas: by acting on the accession countries of the European Union and by acting on the current model of functioning. Consequently, the paper discusses whether Brexit works through the effects of the future integration processes in these areas. The discussion highlighted the need to continue the expansion of the European Union to the accession countries, ie the countries of the Western Balkans, regardless of Brexit. The confirmation of these conclusions can be found in the works of numerous authors (Börzel, Dimitrova and Schimmelfenning, 2017; Kandžija, Kandžija and Tolić, 2017; Butler, 2017; Mišćević, 2016; Stratulat, 2016 and 2014, and others) who merge Western Balkan countries into the European Union as a strategic advantage for both sides. Even though it has caused doubts in the success of the integration processes, it is projected that Brexit will act more of an incentive in continuing the process of structural reforms of the accession countries, and also in continuing negotiations in the direction of spreading the value of peace, stability and democracy. In examining the effects of Brexit on the current model of the functioning of the European Union, a conclusion has been reached on the need to define new integration principles as the only alternative for preserving the integrity of the European Union. In this respect, Brexit is an opportunity to reform the model of functioning, whereby a differentiated integration model is suitable. The above mentioned has been confirmed by theorists (Chopin and Lequesne, 2016; Wahl 2016; Noelke, 2013; Dyson and Sepos, 2010; etc. Moreover, Dyson and Sepos (2010) see the differential integration of the European Union as a natural state due to its own character as a system of "complex states" and "complex policies". It is considered that the European Union will not avoid differentiation in the future, but Brexit will by no means mark the end of European integrations. Namely, the existing ties between Member Countries, particularly in the areas of economy and mutual interests, are so strong that their abolition would lead to the economic collapse of the countries. In addition, neighboring countries share common interests in trade, infrastructure, people's movement, etc., fulfillment of which is precisely the model of differentiated integrations.



European integrations, faced with dynamic and unpredictable challenges, must be adaptive and ready for new changes. In this regard, Brexit represents a chance for a thorough analysis of its principles of action for the European Union, mutual relations with member countries, as well as relations with citizens. The current events have undoubtedly become an incentive to create a new and more harmonious European Union with greater determination. Historically, in the long run, the European Union has always been strong in the crisis situations it faced. A more cohesive, harmonious Union after Brexit can take the opportunity to identify its integration goals and strengthen its action in the alliance of peace, stability and democracy. It is necessary to state several restrictive facts, considering the results of this research. Namely, at this stage it is difficult to develop a precise estimate of the scope and intensity of the effects of Brexit and its long-term political and strategic consequences. Polarized attitudes and opinions of analysts and experts who equally predict optimistic and pessimistic scenarios, both for the United Kingdom and for the European Union, point to the difficulty of forecasting. Therefore, a full evaluation of the effects of Brexit will only be possible to later analysts and historians when the methodology and analytics of the completed negotiation process are known and the effects measurable. One thing is certain: The United Kingdom's exit from the European Union will mark the period of harmonization and / or technical interventions in the field of European Union policy, which will, to a lesser or greater extent, reflect on the future of European integration processes. The research that was carried out relies on previous researches of various respectable authors, and actually expands and enhances the thematic framework, which is viewed from many different aspects. At the same time, the significance of this research is derived from the relevance of the subject, as the subject matter is fully aligned with current events on the European scene. Related to this, this research makes a new step forward in advancing both theoretical and applied knowledge of the future of European integration processes.

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## COEXISTANCE OF THE MARKET ECONOMY AND STATE INTERVENTION: THEORY OR REALITY?

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### **ABSTRACT**

*An ideal mechanism for functioning of the modern economy could be defined as a mixture of the free market and state intervention. However, what is the way to ensure that adequate intervention of the state is in harmony with free market operations – that is the question which certain countries managed to answer better than the others. The aim of this paper is to explore the business success indicators of chosen companies in Croatia considering the importance of state intervention in market-oriented markets as well as to investigate if the level of selected social expenditure in chosen EU countries reflects their achieved GDP rise. With this goal in mind, this paper is by its nature interdisciplinary and includes two scientific research branches – general economy and organization and management. In order to give a complete answer on the starting research question, the method of the analysis and the method of synthesis of strategic important documents as well as the case studies method for examples of successful entrepreneurship initiatives were used as our main tool.*

**Keywords:** *state intervention, economy, organization, management*

### **1. INTRODUCTION**

Development is a term that signifies a process by which something is becoming more perfect, more complete and better adapted. People and society are developing concurrently in a multitude of interdependent segments. As far as the economic segment is concerned, development primarily means an increase in total output and an increase in national income, in order to give the society and individuals the goods they need, providing them with a better quality of existence from a material point of view. Development strongly depends on the relationship between state and the market, so the debate about the most adequate modality of that relationship is everlasting, resulting in generation of different doctrines, all suggesting specific roles of state and market in order to boost growth and income increase (Ferenčak *et al.*, 2014). Thereby, it is not negligible that the role of the state in economic development should be adapted to the country's particularities (Benko, 2014). Therefore, in this paper chosen indicators are being studied which, besides the ones focused on usual economic performance (GDP), are concerned with the context of developed social infrastructure (see more: Table 1 and Table 2). The aim of this paper is to explore the business success indicators of chosen companies in Croatia, considering the importance of state intervention in market-oriented markets as well as to investigate if the level of selected social expenditures in chosen European Union countries reflects their achieved GDP level.

### **2. „THE MODEL“ OF CONTEMPORARY MIXED ECONOMY**

Speaking of mixed type of economy it is clear that there exists a free market interaction considering state intervention. However, different countries will be extremely diverse in regulating state intervention. Regardless of which “subtype” of mixed economy it belongs to, differences in terms of economic results vary greatly. Therefore it is interesting to note, for

example, the social market economy of the Socialist Republic of Germany (furthermore: Germany), whose concept choice according to Hadžiahmetović (2012) is linked to a "special path" in economic policy known as "the third way". The author cites the impossibility of adopting a model and its potential transfer to another society, due to the different cultural, social and ethnic circumstances in which the society for which certain rules are made for exists. As Ghosh states (1992:1365): »The market is never totally free. The market cannot function without the state; and the pattern of development of the market would depend essentially on the nature of the state, the vested interest controlling state power, and the pulls and pressures exercised by different vested interest groups in regard to the functioning of the market system.« The importance of the state role in the economy and whether state-owned property is being managed well in Croatia is a case study researched by Petrović & Šonje (2016). We do believe, however, that public property management would have to give at least as good results as it is the case in private property. Data obtained from certain researches, for example Budiman, Lin & Singham (2009) supports the above-mentioned premises. An example of successful state-based practice based on empirical data, case studies and practical recommendations at different levels is provided, for example, by Gil-Garcia (ur.) (2013), for instance through e-government. Besides, it is well known that some state-owned companies have become global players and there is a generally accepted perception of different behavior in the case of bidding with private companies on the global market (Büge, Egeland, Kowalski & Sztajerowska, 2013). The importance of potential public sector contributions and development opportunities are also reflected in the goals of some important reports such as World Public Sector Report 2017 (2017), where one of the goals mentioned is the research of the government's role and public services with special emphasis of the institutional aspects in fostering sustainable development. Mutual interaction between state interventions and free market could really be "the ideal model" where different countries could pick their own ways of interaction adjusted to their local circumstances, and depending on predispositions of their economies. For example, Hadžiahmetović (ur.) (2012:10) writes about extreme representation of the social component in certain countries like Germany, which is not the only country that found the anchor for its free market economy in well-represented social component. The same model has been recognized and applied by Scandinavian countries as well. Certain de facto economic conditions, for example the process of transition, dictate the need to leave the economy only to the free market model. Wang (2003:2), contradicting certain established principles and taking into account the transitional period of Chinese economy, makes a case for the state actively participating in the process of transition, and finding the explanation for this in three different reasons: „i) even in mature market economies, state interventions are indispensable for remedying market irrationalities and for organizing efficient markets; ii) market institutions cannot be properly installed without the support of the state. Especially, if China is to establish a "socialist market economy," the state has the obligation to mitigate the hardships and the cruelties caused by the market transition; iii) as a giant developing country, China faces many challenges which cannot be settled through voluntary transactions.“ So, examples stated so far fortify the conclusion that the state needs to take an active role in free market model as well as reasons for this opinion. Now we will review the data about investments in specific segments of public sector made by selected countries in order to illuminate the relation between financial „care“ of a specific country and economic success expressed through GDP.

### **2.1. Selected examples of mixed economies**

Republic of Croatia will be analyzed together with other chosen countries based on its membership in the European Union. Certain indicators of the demographic conditions of the selected EU countries will be shown, as well as their investment levels in certain public services relevant to the living standard of their population (Table 1; Table 2). This insight can reveal a picture of potential predispositions, but also some dangers these countries face in determining

the importance of state interventions and investments in certain public services, for example tertiary education in areas such as science, mathematics, computing, engineering, manufacturing or construction as well as age group representation in educational structure considering they represent the potential workforce, or the educated groups of potential employees that can generate economic growth and development. Furthermore, the level of investment in health care corresponding with GDP level is also being researched, as well as the absolute values of investment per capita. The danger level of slipping into poverty after social transfers related to various employment status is also explored; specifically for employed persons, retired persons and other inactive population groups and is expressed in percentages for the year 2015 (Table 1).

*Table 1: Indicators of population number total, tertiary education according to several criteria, healthcare expenses and the rate of danger of being impoverished after social transfers according to several employment statuses in selected EU countries*

Country	Population number	The number of students	Students 20-24 years old	Graduates	Expenditure of selected health care functions (% of GDP)	Expenditure of selected health care functions per inhabitant	Danger of being impoverished for employe persons (%)	Danger of being impoverished for retire persons (%)	Danger of being impoverished for other inactive persons (%)
EU-28	508,504,320	18,385,922	-	19.1	-	-	9.5	13.2	29.0
Croatia	4,225,316	162,022	38.2	16.8	7.23	719.40	5.9	22.1	32.4
Bulgaria	7,202,198	278,953	36.5	14.6	7.72 <sup>2</sup>	400.27 <sup>5</sup>	7.7	30.0	29.1
Germany	81,197,537	2,977,781	29.3	20.5	11.27	3,548.49	9.7	17.0	30.3
Estonia	1,314,870	55,214	31.9	12.8	5.89	763.24	10.0	40.1	33.6
Italy	60,795,612	1,801,686	30.8	13.5	-	-	11.5	11.0	26.4
Latvia	1,986,096	85,881	35.7	12.9	7.23 <sup>3</sup>	508.00 <sup>6</sup>	9.2	36.7	31.9
Lithuania	2,921,262	140,629	41.4 <sup>1</sup>	18.5	6.67	698.10	9.9	27.6	30.1
Hungary	9,855,571	307,729	26.7	12.2	7.97	754.23	9.3	5.0	24.5
Romania	19,870,647	541,653	28.0	14.9	5.56	357.55	18.8	15.8	42.1
Slovenia	2,062,874	85,616	48.3	17.2	8.86 <sup>4</sup>	1,505.25 <sup>7</sup>	6.7	15.9	19.9
Sweden	9,747,355	439,815	26.5	15.3	9.58	3,898.75	7.1	19.2	43.0
Norway	5,166,493	268,231	35.4	14.5	9.39	7,047.33	5.5	10.1	35.2

**Legenda:**

<sup>1</sup>data for Lithuania is for 2014; <sup>2</sup>data for Bulgaria is for 2011; <sup>3</sup>data for Latvia is for 2010; <sup>4</sup> data for Slovenia is for 2011; <sup>5</sup> data for Bulgaria is for 2011; <sup>6</sup> data for Latvia is for 2010; <sup>7</sup>data for Slovenia is for 2011.

\*for all listed indicator relevant year is 2015, except for two chosen indicators about health care since 2012 is the last available on the official Eurostat pages. For the chosen countries for which there was no information neither for the 2012, the data taken is for 2011 with exceptions for certain countries also 2010.

**Population number**=Population number in 2015; **The number of students**=The number of students of tertiary education in 2015.; **Students 20-24 years old**= Students in tertiary education - as % of 20-24 years old in the population in 2015.; **Graduates**=Graduates in tertiary education, in science, math., computing, engineering, manufacturing, construction, by sex - per 1000 of population aged 20-29, per 1000 inhabitants in 2015.; **Expenditure of selected health care functions (% of GDP)**=Expenditure of selected health care functions by providers of health care - % of GDP, in 2012\*; **Expenditure of selected health care functions per inhabitant**=Expenditure of selected health care functions by providers of health care - per inhabitant in 2012.\*; **Danger of being impoverished for employe persons (%)**=Rate of danger of poverty after social transfers of employed persons in 2015 (%); **Danger of being impoverished for retire persons (%)**=Rate of danger of poverty after social transfers of retired persons in 2015 (%); **Danger of being impoverished for other inactive persons (%)**=Rate of danger of poverty after social transfers of other inactive persons in 2015 (%).

(Source: Population number: Eurostat, Population change - Demographic balance and crude rates at national level [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_gind&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_gind&lang=en), 13.11.2017.; The number of students in tertiary education: Eurostat, Students enrolled in tertiary education by education level, programme orientation, sex and field of education, [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ\\_uoe\\_enrt03&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_uoe_enrt03&lang=en), 13.11.2017.; Students in tertiary education - as % of 20-24 years old in the population: Eurostat, [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ\\_uoe\\_enrt08&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_uoe_enrt08&lang=en), 13.11.2017.; Graduates in tertiary education, in science, math., computing, engineering, manufacturing, construction, by sex - per 1000 of population aged 20-29, per 1000 inhabitants in 2015, Eurostat, [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ\\_uoe\\_grad04&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_uoe_grad04&lang=en), 14.11.2017.; Expenditure of selected health care functions by providers of health care - %, [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_sha1p&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha1p&lang=en), 13.11.2017.; Expenditure of selected health care functions by providers of health care - per inhabitant, Eurostat, [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_sha3h&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha3h&lang=en), 13.11.2017.; the rate of danger of being impoverished after social transfers of employed persons in 2015 (%), Eurostat, [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of-poverty\\_rate\\_after\\_social\\_transfers\\_by\\_most\\_frequent\\_activity\\_status,\\_2015\\_\(%25\)\\_YB17.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of-poverty_rate_after_social_transfers_by_most_frequent_activity_status,_2015_(%25)_YB17.png), 11.11.2017.; the rate of danger of being impoverished after social transfers of retired persons in 2015 (%), Eurostat, [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of-poverty\\_rate\\_after\\_social\\_transfers\\_by\\_most\\_frequent\\_activity\\_status,\\_2015\\_\(%25\)\\_YB17.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of-poverty_rate_after_social_transfers_by_most_frequent_activity_status,_2015_(%25)_YB17.png), 11.11.2017.; the rate of danger of being impoverished of other inactive persons in 2015 (%), [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of-poverty\\_rate\\_after\\_social\\_transfers\\_by\\_most\\_frequent\\_activity\\_status,\\_2015\\_\(%25\)\\_YB17.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of-poverty_rate_after_social_transfers_by_most_frequent_activity_status,_2015_(%25)_YB17.png), 11.11.2017.)

Selection of stated criterias is connected to reflection on the importance of certain qualitative and quantitative demographic indicators as a condition for economic growth and development. Development levels in various national economies differ greatly. Benabou (2002) states that the social contract varies considerably across nations, taking for example rates of taxes where some have low tax rates, and others steeply progressive fiscal system or differences in the way they organized financing of education and health insurance, where some allotted it to the responsibility of the state while some others chose to leave it in domain of families, local communities and employers. Author emphasizes that the redistribution is often correlated with income inequality in a way which is opposite to the one predicted by usual politico-economic theory because, for instance, among the industrial democracies the more unequal ones tend to redistribute less. For example, Scandinavian countries are the most equal and the most redistributive in this respect. Available and chosen indicators of the selected European Union countries reaffirm the earlier conclusion about higher investment levels in scandinavian countries (Table 1, Sweden, Norway) as far as health care as a part of public services is concerned. In addition, high level of investment in health care compared to other European Union countries is also present in Germany (on both indicators). Based on absolute and percentage values, Croatia has a significantly lower level of investment in this respect, comparable to Latvia, Bulgaria and Hungary. Furthermore, the Table 1 shows the indicator of poverty danger for some of the previously mentioned groups. Criteria on which the danger of sliding into poverty after social transfers in based on is connected to the view that persons who are active on the employment market should not be the focus of state intervention, considering that their income as employed persons should be high enough to maintain the normal living standard. In Croatia, 5.9% in this category should not be „a problem“ for the state. However, danger of sliding into poverty after social transfers of retired persons in the year 2015 is alarming (22.1%) compared to EU-28 figures (13.2%). Moreover, the danger of sliding into poverty after social transfers of other inactive persons is very worrying: 32.4% compared to 29% in EU-28. It is interesting to note that the danger of sliding into poverty of retired persons in mostly transitional countries (Estonia, Latvia, Lithuania) is pretty high. From this we can deduce that the transitional period „cost“ the state a large number of pensioners in the form of

early retirements which leads to unsustainable situation of large number of retired persons compared to active workforce and results in potential danger of this social group being impoverished. The rate of danger of sliding into poverty after social transfers of other inactive persons shows that even in countries which are very sensitive to the need to „care“ for quality of public services, Sweden and Norway (43.0, 35.2 respectively), in these countries as well persons have a high risk of being threatened by poverty when concerning mentioned group. However, it needs to be stated that all other selected countries, with the exception of Italy (26.4%), are above the EU-28 average (29.0%), so mentioned is a problem found in almost all of the selected economies. In continuation, we study additional indicators (Table 2) to reaffirm the belief that countries which invest more in social infrastructure and care for their population in general achieve higher rates of economic growth as shown by the examples of selected scandinavian countries.

*Table 2: The indicator of social security, the percentage of persons in danger of impoverishment or social exclusion, the percentage of government's investment in research and development compared to the overall budget, the percentage of individuals who use the internet for interaction with public authorities belonging to the age group of 16-74 years old, the percentage of renewable energy in gross final energy consumption, Gross domestic product at market prices*

Country	Social protection	At risk of poverty or social exclusion	Outlays on research and development	Individuals internet users for public authorities interaction	Renewable energy in gross final energy consumption	Gross domestic product
EU-28					16.7	29,000
Croatia	2,227.40	29.1	1.68	35	29.0	10,600
Bulgaria	1,126.29	41.3	0.59	18	18.2	6,300
Germany	10,839.44	20.0	1.99	53	14.6	37,300
Estonia	2,273.47 <sup>1</sup>	24.2	1.72	81	28.6	15,500
Italy	8,128.19	28.7	1.01	24	17.5	27,200
Latvia	1,830.57	30.9	0.52	52	37.6	12,300
Lithuania	1,999.60	29.3	0.93	44	25.8	12,900
Hungary	2,248.74	28.2	0.57	42	14.5	11,300
Romania	1,114.33 <sup>2</sup>	37.4	0.72	11	24.8	8,100
Slovenia	4,360.44 <sup>3</sup>	19.2	0.86	45	22.0	18,800
Sweden	13,370.12	18.6	1.58	73	53.9	45,800
Norway	18,719.76	15.0	1.9	81	69.4	67,100

**Legend:**

<sup>1</sup>data for Estonia is for 2014; <sup>2</sup>data for Romania is for 2014; <sup>3</sup>data for Slovenia is for 2014.

\*for all indicators stated, the year 2015 was considered

**Social protection**=Social protection expenditure in 2015; **At risk of poverty or social exclusion**=People at risk of poverty or social exclusion, % of total population in 2015; **Outlays on research and development**=Share of government budget appropriations or outlays on research and development in % of total general government expenditure in 2015; **Individuals internet users for public authorities interaction**=Individuals using the internet for interaction with public authorities: % of individuals aged 16 to 74; **Renewable energy in gross final energy consumption**=Share of renewable energy in gross final energy consumption in % in 2015; **Gross domestic product**=Gross domestic product at market prices, at current prices, euro per capita.



*Source: Social protection expenditures, <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>, 13.11.2017; People at risk of poverty or social exclusion, % of total population in 2015, Eurostat, <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tgs00107&plugin=1>, 14.11.2017; Share of government budget appropriations or outlays on research and development in % of total general government expenditure in 2015: Eurostat, <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tsc00007&plugin=1>, 14.11.2017.; Share of renewable energy in gross final energy consumption in % in 2015, Eurostat, [http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020\\_31&plugin=1](http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_31&plugin=1), 15.11.2017.; Gross domestic product at market prices, at current prices, euro per capita, Eurostat, <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00001&plugin=1>, 14.11.2017.*

Investment in social security speaks of the state's care for the segment of public services. Besides other criteria, it takes into account the indicator of percentage of population that is in danger of being impoverished or socially excluded. As far as achieved investment level in research and development is concerned, and considering multiple theoretical confirmations of positive influence of research and development on economic growth (f.e. Khan, 2015; Blanco, Prieger & Gu, 2013; Ulku, 2004; Griffith, 2000), reasons to consider this indicator is very clear. Furthermore, the table includes the percentage of renewable energy in the overall consumption during 2015 and GDP for the same year. Looking at the social protection indicators, as expected the highest social protection is secured in Scandinavian countries (Norway, Sweden). Besides these two, relatively high expenditure for social protection are present in Germany, while transition countries (Croatia, Estonia, Hungary) have approximately the same expenditure, and remaining countries which are also considered to be in transition have lower expenditure of this sort (f.e. Lithuania, Bulgaria, Romania). It is possible to note that GDP level follows country ranking based on social security investments almost completely (the ranking of first six countries: Norway, Sweden, Germany, Italy, Slovenia, Estonia). It is logical that, considering the percentage of population in risk of being impoverished or socially excluded, the lowest risk rates are present in countries that have the highest investment rates in social security, led by 15% risk for Norway, 18.6% for Sweden, followed by 19.2% in Slovenia while in Croatia this figure is 29.1%. As far as investment in research and development is concerned, or the percentage of government funding in these areas, Germany's investment rate for the year 2015 is the highest (1.99%), followed by Norway (1.90%), Estonia (1.72%) and Croatia (1.68%). Countries that invested the least in this respect are Latvia (0.52%), Hungary (0.57%) and Bulgaria (0.59%). The use of internet services to access public sector also gives insight into the accessibility of public services. The greatest percentage of individuals aged 16-74 using the internet to interact with public authorities is found in Norway and Estonia (81% for both). In Sweden the number of people using the internet in order to interact with public authorities is also very high. In Croatia only about a third of the population in selected age group (35%) use internet in this manner. The lowest percentage in this category can be found in Romania, where only 11% of the population in selected age group interacts with public authorities via internet. The percentage of renewable energy sources in total energy usage is again the highest in Norway (69.4%), followed by Sweden (53.9%). In Croatia, this percentage is only 29%. Based on the data stated, it is evident that, besides GDP level, Norway and Sweden are in the top for most indicators selected. Germany also has very good results in most of the indicators measured. Most of these indicators can be further improved by larger investment in human resources which will use their new skills and knowledge either to create new values or improve the existing ones. The way in which European Union promotes and strengthens human resources of its members is usually through European Social Fund (in further text: ESF). As a main instrument of the European Union, ESF is directed towards encouraging employment, helping employees find better jobs and securing fairer employment possibilities for all EU citizens.

Specific projects which are a part of ESF programs are led by various organizations-participants, for example public administration organizations, companies, non-government organizations and social partners active in the field of employment and social inclusion.

### **3. CROATIA'S PLACE IN MIXED ECONOMY MODEL**

Croatian model of economy has been determined by different circumstances. On one side, for almost half a century Croatia belonged to the system of centrally planned economy. That period was immediately followed by the war and years of political instability. Such conditions required a high degree of social and economic interventionism. On the other side, Croatia has always admired European countries for their model of social democracy and thought of it as a desirable model for its own socio-political and economic structures (Benko, 2014, Držić, 1997). As a result, it is understandable that expectations for the state to intervene are higher in contemporary Croatian economy than in traditional European models, similarly to other transitional countries (Felsmann, 2016). Additionally, when considering the role of the state in economic development, it should be considered that this role largely depends on the level of technological and economic development of a particular country. In technologically and economically developed countries, with developed market economy institutions, with experienced, educated and numerous entrepreneurs and managers, there is no need for the catalytic function of the state. But in the less developed and young market countries as Croatia, burdened with their past and characterized by insufficiently developed professional, legal, financial, institutional and other prerequisites for a spontaneous, self-generating process of accelerated growth, the role of the state in initiating growth becomes of a first-class significance (Mesarić, 2001). Today, Croatia is living in the age of neoliberalism. As a dominant ideology of today's world, it influences how companies behave on the market, suggesting competition as the best solution for existence. In the same time, neoliberalism is often referred to as the main reason for the recent economic crisis (Koporčić et al, 2015). Although still in a delicate situation, economic recovery in Croatia showed its first signs in the last quarter of 2014, continued in 2015 and speeded up further in 2016 with year-on-year growth rates close to 3%, implying that the Croatian economy fared quite well in spite of political turbulences that caused a postponement of structural reforms. Growth was brought about by the rise in all domestic components of GDP (private consumption, government consumption, investments and net exports), whereby the largest contribution to growth came from private consumption. All the domestic GDP components are projected to rise further in 2018, and investments are supposed to grow at the highest rates. This is based on the assumption of more intense use of the EU funds for financing infrastructural and other projects, resumption of investments that were halted due to the political instability in 2016, as well as the encouraging effect of the tax reform (SEE 6, Croatian economic outlook, 2017.) Lately, Ministry of Finance initiated one of the rare structural reforms - the tax reform. The reform hinges on the idea that the overall tax burden should be lowered in order to increase Croatia's competitiveness, that overall personal income tax burden should go down so as to stimulate employment and that the taxation of higher tax brackets should also decrease so that further brain drain should be discouraged. In order to consider projected growth rates sustainable in the long run, this reform needs to be followed by other measures aimed at diminishing the administrative burden. The more active, systematic and aggressive role of the state in encouraging, harmonizing and directing economic development implies not just a stimulating fiscal policy but taking the responsibility for undertaking a whole range of measures aimed at stimulating and assisting entrepreneurial initiatives and projects, encouraging job creation, attracting direct foreign investments, adapting education system to market needs, supporting innovativeness and modern technologies, engaging in design of a more efficient legal system and the suppression of corruption, monetary stability. Challenging as they are, realization of such tasks is possible through leaning on supranational frameworks such as

European investment plan. The European Commission's Office in Croatia has announced ([https://ec.europa.eu/croatia/business-funding/economy\\_hr](https://ec.europa.eu/croatia/business-funding/economy_hr)) that the Investment plan aims to invest 500 billion EUR in Europe in total through the European Fund for Strategic Investments (EFSI). Investment priorities tend to increase growth and jobs creation, primarily in following sectors: research, development and innovations; energy; traffic; ICT; environmental protection and efficiency of resources; human capital, culture and health protection; support for SMEs. With such background, coexistence of the market economy and state intervention imposes itself as condition sine qua non, with an active role of the state as a driving wheel. However, there are studies (Mesarić, 2001) showing that in order to be able to harmonize the business of economic entities with public interests, i.e. in order to be partner efficiently cooperating with private subjects on the market, the state needs to meet two preconditions. First, the state must be democratic, in the original meaning of that word – it should truly express and carry out the will and interests of the people. Secondly, the state must be meritocratic, meaning it must be competent solving complex economic, social and other issues. This prerequisite can be accomplished only if public companies and government bodies employ professional and experienced workforce.

### **3.1. Possibilities of market economy and state intervention coexistence in Croatian context**

Modalities of state intervention in market economies significantly differ among countries. They are primarily formed based on the size of the economy, the degree of economic development, the economy structure, the quality of human resources, the level of institutional development and the exposure of the economy to the changes in the global market (Aizenman, Jijarak, 2009). In the process of transition and privatization, handing over a significant part of state property to the market certainly narrows the scope of economic policy and state action to affect economic development. For example, selling the banking sector to foreign owners has largely disabled the state in managing the development of the financial sector, while its development strategy is now determined by its owners. At the same time, this reflects on the real sector, whose development strongly relies on the support from financial sector (Buturac, 2014). Traditionally, market interventions undertaken by the state in transitional countries imply the measures directing the behavior of economic entities to achieve set strategic goals. These measures comprise of direct incentives on the one hand and fiscal measures in the form of tax relief or remuneration on the other. The problem is, both of these measure types mean budget intervention which could be significantly limited in times of restrictive budget situations. Therefore, in such times market interventions undertaken by the state can be successful only if administrative system as a whole is highly organized and efficient (Benko, 2014). In the context of Croatian economy, proactive role of the state is somewhat inhibited by an oversized administrative body, which is in the same time insufficient regarding its efficiency as well as the quality of its services and support. Economic institute of Zagreb has conducted a research on public sector in Croatia. First part of their study was concerned with the perception of Croatian citizens. It has been identified that inefficiency of the public sector is the most resented characteristic by the citizens. Such result has been tested through additional statistical analysis based on chosen, relevant variables. Unfortunately, these tests confirmed the Croatian public sector inefficiency, identifying its level under the European average (Buturac, 2014). However, encouraging is the government's awareness of such situation, resulting in creation of the development strategy that aims to both solve these issues while accelerating the pace of economic growth. Strategic documents, created in cooperation of public and private subjects, are the best platform for their coexistence. Croatian strategy of spatial development (2017) plans for coexistence through several development determinants: affirmation of polycentricity, alleviating the pace of depopulation of the most endangered areas, preserving the identity of Croatian space, the use of geopolitical position advantages, sustainable development of the

economy and infrastructure systems, connecting with European area, integrated approach to spatial planning and active adaptation to dynamics of changes. Speaking of market and economic issues, sustainable development of the economy and infrastructure systems is the factor most relevant for the topic of this paper. It is increasingly evident that the importance of state institutions is becoming more important for areas in which private sector management is not appropriate. This is for sure the case with the use of public goods, where transparent regulation of concessions remains the primary responsibility of the state. On the other hand, coexistence of the state and the market could be discussed not only through state support but also through a systematic withdrawal of the state from all activities for which there are indications that the market could manage them better. This is the case with part of the infrastructure - public transport, telecommunications, communal services, energetics etc. Perhaps the best case study for illustration of successful coexistence of the state and the market is the case of gas energy and companies related to it. During the process of joining the European Union, Croatia has gradually liberalized the gas market, in particularly supply and distribution segment, in which currently around 90 companies operate. The process officially ended in 2017, with the abolition of state monopoly and the introduction of market-based price formation as well as ensuring a higher standard of service and security of gas supply. Due to the liberalization of gas supply, the market share of private enterprises has increased, while the state owned companies are being gradually squeezed out of the market (Bajo et al. 2016).

*Table 3: Indicators of productivity, profitability, financing and liquidity of ten leading trading companies in energy production and distribution in 2015 (Source: Kordej De Villa, Ž. (2016) Sektorske analize – energetika i naftna industrija, Ekonomski institut Zagreb)*

	Labour productivity (thousands of kn)	Gross margin (%)	Return on assets – ROA (%)	Indebtedness coefficient	Current liquidity coefficient
HEP (konsolidirano)	22.081	18.9	5.5	0.29	2.67
Prvo plinarsko	250.158	6.9	19.2	0.74	1.91
HOPS	1.561	11.64	3.9	0.25	0.8
Gradska plinara Zagreb - Opskrba	14.297	3.27	9.7	0.65	1.53
GEN-I Zagreb	78	1.14	1	0.89	1.07
TE Plomin	-	0.69	1.1	0.49	1.49
HSE Adria	531.130	0.52	4.1	0.9	1.11
RWE energija	53.684	-4.7	-22.4	0.52	1.72
MET Croatia Energy Trade	35.302	4.5	7.6	0.69	1.39
Vestas Central Europe Zagreb	68.995	0.02	-0.1	1	0.99

Although gas supply and distribution market has remained highly concentrated, private or dominantly private entities that have replaced state monopoly are recording remarkable results (Sektorske analize, 2016). As seen from the Table 3, several companies dealing with gas have been among the 10 most successful companies involved in energy business in 2015. For example, Prvo plinarsko društvo d.o.o., even after significant investments, recorded a ROA coefficient of 19.2 and current liquidity coefficient of 1.91. So, there is still full state control over the gas extraction business as the usage of public goods, but on the other hand we have

witnessed the liberalization in the gas supply and distribution segment. It is not just that results justify newly formed coexistence of market and the state in the gas industry, but they also set the energetics strategy as one of the overall development pillars. As such changes are in compliance with previously mentioned supranational goals, perhaps we could dare to hope for their success and sustainability.

#### 4. CONCLUSION

Regarding Croatian economy, it could be said that there are two groups of problems regarding development. One is related to the question of how to launch new investments and re-establish economic growth, and the second needs to address the role of the state in that respect (Benko, 2014). The current government tends to answer these problems by realization of four main objectives stated in their program from 2016 (SEE 6): achieving stable and lasting economic growth, creating new and high quality jobs, stopping emigration and supporting the demographic renewal, and reaching social justice and solidarity. Realization of these goals strongly relies not only on compatibility with goals of the European Union, but also on a financial support from EU funds. Research presented by this paper identified that other transitional countries, with lower tax burden, are able to generate higher growth rates. This is an additional argument that Croatia needs cheaper, but more efficient public administration. By strengthening qualitative and quantitative demographic indicators the whole national economy is strengthened as well, with state interventions in matters which affect minimum living conditions and quality of life.

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## CONSTRUCTION IN RUSSIA: CAN SMALL BUSINESS GROW BIG?

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### **ABSTRACT**

*Most economists believe that the strategic goal of any business is the growth of the company which is primarily determined by the rates of sales growth. Managing the growth of a company requires balancing of the company's goals from the perspective of possible sales, efficiency increasing and availability of financial resources. The modeling of sustainable growth is widely used in practice of financial management and there are number of models worked out for this purpose. Objective of the paper is to assess the growth opportunities of small construction companies operating in Saint-Petersburg. Two models of sustainable growth were used – the Higgins' model and the model suggested by Van Horne. The conclusions were made about the applicability of the models and about the possibility to realize the growth rate calculated with their use.*

**Keywords:** *small business, construction, sustainable growth*

### **1. INTRODUCTION**

Most large companies started out as small businesses, and many today's small businesses tend to become large companies. A necessary condition for realization of such a perspective is growth, which is most often treated as an increase in the size of the company. Indicators of the company size are, for example, the assets, turnover, profit or the number of employees. Incentives for the growth can be divided into two categories: rational and objective, as well as based on psychology and expectations. Business leaders tend to believe that growth is a prerequisite for the survival of the company. Despite the obvious importance of the company's growth, it should be taken into account that growth is not always good, and that it can cause a number of problems for the growing company (Ivashkovskaya, 2006). Growth often leads to more complex and less flexible organizational schemes, requires new knowledge and competencies for successful management. Growth and expansion of business often require large amounts of invested capital, which may pose a problem for the company. In a growing company, the growth in unit production costs may outpace the growth in market share (Penrose & Pitelis, 1959). A number of empirical studies found that the size of the firm and its age are usually inversely related to the level of product innovation (Erden, von Krogh, Nytorp & Hultberg, 2009). In the opinion of M.I. Kamenetskiy and L.V. Dontsova (2008), the Russian construction complex has been and remains a critical factor in the development of industrial and social sphere, which manifests itself "in its permanent inability to meet the needs of the national economy in the commissioning of production capacities, in terms of construction, in the modern scientific and technical level of the products produced at the enterprises being created, and also to ensure the satisfaction of the population's demand for affordable housing." The main task future construction complex development is the transition from position constraining the development of the national economy to position fully satisfying the demand for construction products. The solution of this task requires building up the material base of the construction industry, which should be manifested not only and not so much in the growth of the number of enterprises operating in the branch, but rather in their consolidation, the growth of aggregate assets operating in the construction. Within strategic plan of each construction company, the question of the necessity and / or desirability of its growth, the opportunities available and the ways to mobilize it, the possible growth boundaries and the factors that determine these boundaries should be raised (Lapina, Guzikova, 2013).



Due to the fact that, in the framework of small business support, the state provides certain benefits and incentives to small businesses, especially in terms of taxation, and provides access to useful resources - advisory support, grants and subsidies, it may be strategically disadvantageous for small companies to get larger. V.G. Basaraeva (2010) believes that today small businesses in Russia do not have positive incentives to grow to become medium-sized. So, in order to save tax privileges and keep the opportunity to conduct simplified reporting, growing companies often prefer to artificially split into few small parts than to move to another regulatory category. Due to such solutions, the expansion of the small business sector is becoming an artificial process, and growth is masked by dividing into several legally independent firms, which in fact represent a single business. At the same time, the enlargement of a small construction company in the regulatory framework of a small business may allow profitable use of market opportunities and reserves of organizational, technological and human resources. External environment impacts the firms, and they change very quickly, therefore, to solve the problem of determining the growth targets attainability, it is necessary to use models that take into account the changing parameters of the company. According to the concept of R.C. Higgins (1977), known as a model of optimal growth strategy, sustainable growth is the maximum rate to which a company can increase sales without depletion of its financial resources. In the model of J.C. Van Horn (2008), developing the concept, the company has the ability to manage growth by setting the ratio of income to the founders and changing the ratio of debt and equity. Objective of the current paper is to assess the internal growth opportunities and prospects of small construction companies operating in Saint-Petersburg, on the base of sustainable growth rate models. In different countries, the characteristics of small businesses vary within wide limits. This applies to the parameters according to which the entity belongs to the category of small businesses, as well as to the social position and role of small business, to the scope and areas of economic activity and to its results. However, in general, the state of small business is a reflection of the state of the economy and society, emerging in the country in a certain period of time. From this standpoint, in our opinion, it is necessary to analyze the state of small business for the decision-making on its regulation and development. The aim of this paper is to identify and explain the specifics of small businesses in Russia in the context of economic theory and contemporary socio-economic processes. In a study of Russian small business as a socio-economic phenomenon, by our view, it is necessary to take into account the heterogeneity of the territorial socio-economic development within the country.

## 2. DATA SOURCES AND METHODOLOGY

Quantitative data on small construction companies of Saint-Petersburg were obtained from the Interfax database SPARK. Data include selective information from balance and income reports of 2015. The initial list included 812 companies. Initial list of companies was separated by the number of employee as the first criterion of belonging to small business; the distribution is shown in the Table 1.

*Table 1: Distribution of the companies*

Number of employee	Number of companies
0-5	297
6-10	49
11-15	65
16-50	232
51-100	118

To assess the growth opportunities of the companies, two models of sustainable growth were used. The first model was suggested by R.C. Higgins (1977) and now is considered classic. The main formula of the model is the following:

$$\Delta B = \frac{NP * NPRR * A * AT}{S * E}$$

- NP* - net profit;  
*NPRR* - net profit reinvestment ratio;  
*A* - assets;  
*AT* - assets turnover ratio;  
*S* - sales;  
*E* - equity

The second model is the model of sustainable growth was developed by Van Horn (2008) for corporative companies and includes the initial values of sales, equity, amount of income the company plans to pay to its shareholders, and the amount of additional capital contributed by the shareholders. The formula for calculating the rate of sustainable growth is presented below:

$$SGR = \frac{(Eq_0 + NewEq - Div) \times \left(1 + \frac{D}{Eq}\right) \times \frac{S}{A} \times \frac{1}{S_0}}{1 - \left[ \frac{Np}{S} \times \left(1 + \frac{D}{Eq}\right) \times \frac{S}{A} \right]}$$

where

- NewEq* - new equity issued  
*Div* - sum of income payed to the shareholders  
 $\frac{S}{A}$  - assets turnover ratio (ratio of sales to assets)  
*Eq<sub>0</sub>* - initial equity;  
*S<sub>0</sub>* - starting sales (sales of previous year);  
 $\frac{NP}{S}$  - net profitability of sales (ratio of net profit to sales);  
 $\frac{D}{Eq}$  - financial leverage (ratio of debt to equity).

The model can be applied to the small companies as well as to large corporations. It allows calculating the sustainable growth rate year after year under changing conditions. High SGR value, achievable in one year, does not mean that this growth rate will be maintained in the future.

### 3. RESULTS

Firstly, to find dependences between the indicators of the groups of the companies the correlation coefficients were calculated and represented in the Table 2. Values of the correlation coefficient exceeding 0.5 were highlighted as significant. Correlation between the assets and revenue is more than 0.5 only in one group though it could be supposed that revenue is generated by assets. Correlation of the assets and financial leverage ratio has value exceeding

0.5 only in the one group also, as well as correlation with the tax burden in sales. The only dependence which can be considered actually significant is the strong correlation of the companies' assets with the debt. Moreover, the short term debt is relevant in all groups while in the groups of larger companies (from the standpoint of personnel number) the long-term debt is also correlated with the assets. The further analysis is concentrated on a group of companies with a higher number of employees, given that a multiple increase in personnel in the conditions of a general economic recession is impossible, especially since the deficit of qualified personnel in the industry has been repeatedly noted by experts. We consider that the most real chance to get big enough to enter the category of medium-sized business have the companies with the number of employee from 51 to 100.

Table 2: Correlations between the companies' indicators

Indicator	Number of employee				
	0-5	6-10	11-15	16-50	51-100
Correlation of assets with					
Sales	0.3304	0.3731	0.5402	0.4462	0.0964
Debt	0.9967	0.9974	0.9921	0.9961	0.9898
Long-term debt	0.3243	0.2702	0.4727	0.7386	0.7213
Short-term debt	0.9664	0.9746	0.9878	0.9655	0.8872
Gross profit	0.0646	0.4837	0.4811	0.2821	0.2109
Profit before taxes	0.1329	-0.0878	0.1279	0.0885	0.1255
Net profit	0.1271	-0.0971	0.1373	0.0778	0.0743
Taxes	0.1475	-0.0576	0.0889	0.1096	0.3365
Assets turnover ratio	-0.1166	-0.1241	-0.4335	-0.3796	-0.4235
Assets profitability by gross profit	-0.0600	-0.1711	-0.1344	-0.1935	-0.2893
Assets profitability by net profit	0.0866	-0.1380	-0.0741	-0.0362	0.0029
Financial leverage ratio	0.4834	0.5479	0.3333	0.3712	0.1098
Tax burden in pre-tax profit	-0.0232	0.0952	-0.0465	0.0187	0.2519
Tax burden in sales	0.0927	-0.0899	-0.0633	-0.0122	0.5373
Correlation of sales with					
Debt	0.3367	0.3607	0.5293	0.4292	0.0872
Long-term debt	-0.0114	0.0859	0.5053	0.2765	-0.0742
Short-term debt	0.3538	0.3547	0.5031	0.4316	0.1490
Gross profit	0.2177	0.1300	0.3634	0.3721	0.3448
Profit before taxes	0.0767	-0.0811	0.3178	0.3155	0.2533
Net profit	0.0791	-0.0794	0.3195	0.3182	0.2287
Taxes	0.0626	-0.0804	0.2774	0.2596	0.3078
Assets turnover ratio	0.0145	0.3574	-0.0260	-0.0803	0.0137
Assets profitability by gross profit	0.1588	0.2361	-0.0391	-0.1697	-0.1222
Assets profitability by net profit	-0.0778	-0.1666	-0.0813	0.0133	-0.0474
Financial leverage ratio	0.0425	-0.0655	0.1974	0.1025	0.0033
Tax burden in pre-tax profit	-0.0928	0.1556	-0.1571	0.0090	-0.0753
Tax burden in sales	-0.0765	-0.1481	-0.0387	-0.0193	-0.0395

To answer the question whether small firms of the selected group can use debt capital for growth the market credit rates were compared to the gross profitability of assets. The distribution is represented in the Fig. 1. As follows from the Credit Market Review (2016) in 2015 the average interest rate for small and medium-sized businesses for both short-term and long-term loans did not fall below 16%. For about half companies (58 companies), such a level is absolutely unacceptable, since their return on assets is much lower and does not exceed 13%. Even with positive rates of sustainable growth, the build-up of borrowed funds for such companies is problematic. The remaining companies are able to withstand this level of credit rates and even use the effect of financial leverage to improve the profitability of assets. It should be noted that with a high proportion of debt in average (the level of borrowed funds in the range of 5% to more than 99%), 90 companies do not use long-term bank loans, and 59 companies do not use short-term bank loans. Based on the Higgins' model, companies development can be paced and main indicators of financial activity can be adjusted. The model clearly identifies critical variables (profitability ratio, reinvestment ratio, financial leverage ratio, asset turnover ratio) that determine the company's sustainable growth. The drawback of the model is that the basic situation is assumed constant, and only certain parameters can change, that is, it is assumed that both the market and the company do not change significantly (Yakimova, 2013). In today's situation this assumption seems restrictive, but estimates based on the Higgins' model allow demonstrating primarily the internal capabilities of companies. As the basic variant corresponding to the financial equilibrium of the company, the values of the model parameters achieved in the previous period appear. By choosing different values of these parameters, an acceptable or even optimal value of revenue growth may be determined. Deviation from the optimal value will require additional financial resources, or create an excess of resources, thereby disrupting the financial equilibrium.

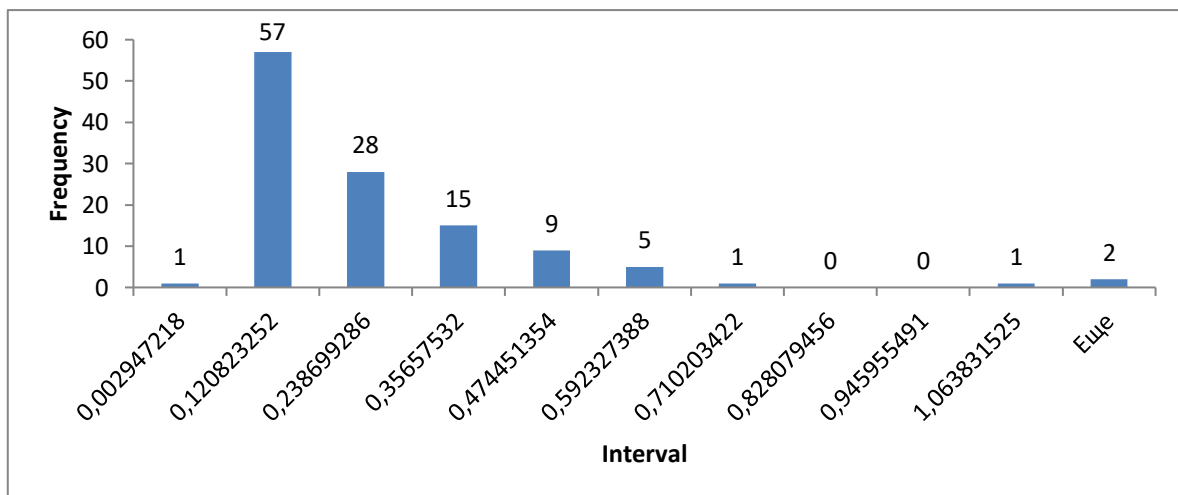


Fig. 1.: Distribution of the companies by the rate of gross profitability of assets

The indicator of sustainable growth according to Higgins' model was calculated for a group of companies selected earlier. Companies for which the "distance" to the small business upper boundary by revenue is less than the growth rate, that can be achieved within the same period, have an opportunity to move to the category of medium-sized business saving their development proportions. Correspondence of sustainable growth rate and "distance" to the lower border of medium-sized business which constitutes 800 m rubles is shown in the Fig. 2. The vertical coordinates show the rate of revenue growth necessary to achieve the upper border for small business.

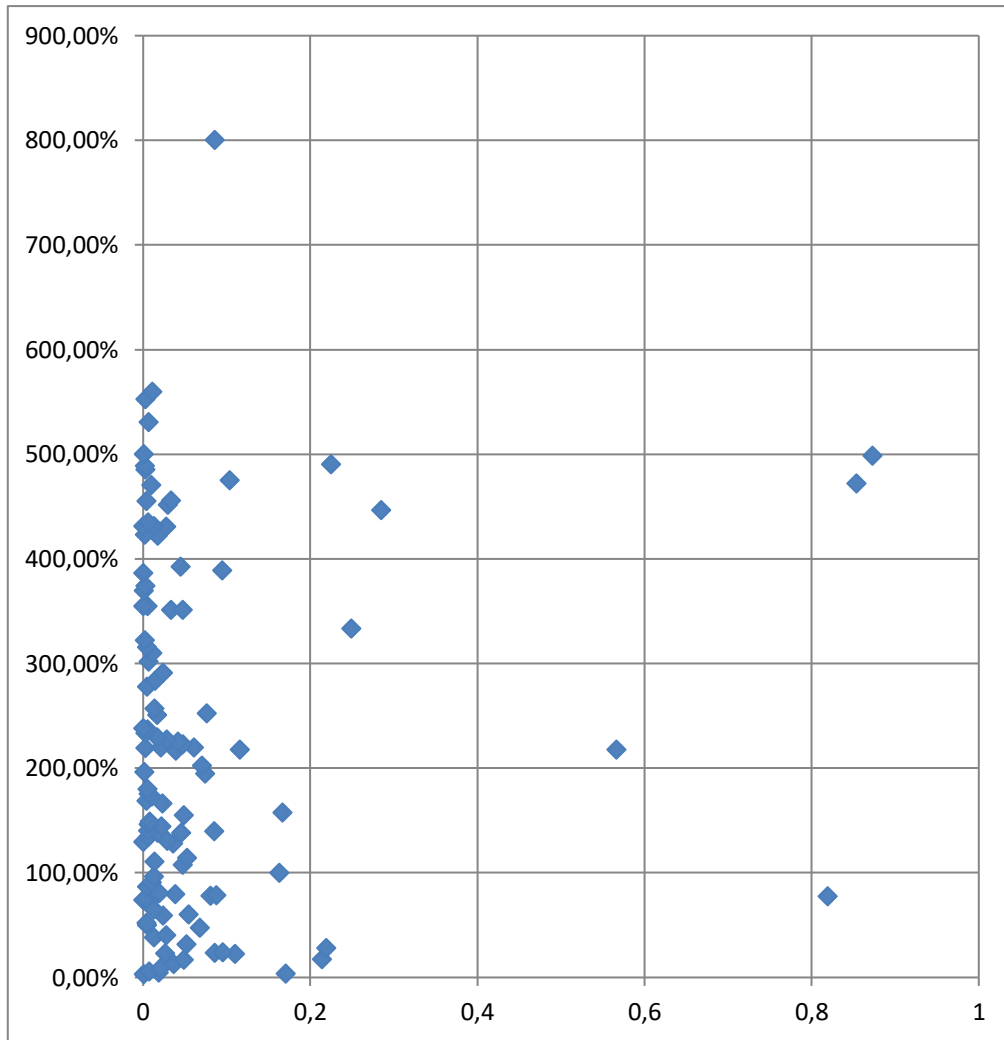


Fig. 2: Correspondence of sustainable growth rate by Higgins' model (horizontal axis) and "distance" to the upper border of small business.

There are only two such companies in the sample (Table 3). Both companies have a financial leverage ratio more than 1, which reflects a high degree of debt dependence, creating a threat of bankruptcy. Their debt is formed exclusively from short-term non-bank sources. Since both companies currently do not use bank loans, they are relatively insensitive to the level of interest rates, but may experience problems in dealing with counterparties and partners.

Table 3: Sustainable growth rates and "distance" to the small business upper boundary

Company	Sustainable growth rate by Van Horne's model	Sustainable growth rate by Higgins' model	"Distance" from upper boundary of small business
Teres. Ltd.	343.31%	21.37%	17.67%
Mining Technologies, Ltd.	243.84%	81.89%	77.71%

The rates of sustainable growth were also calculated for the companies of the selected group. Descriptive statistics for both indicators is represented in the Table 4. It is evident that indicators of sustainable growth calculated by the model of Van Horne have bigger values, larger variance, standard error, kurtosis and skewness.

Table 4: Descriptive statistics for sustainable growth rates

Indicator	Sustainable growth rate by Van Horne's model	Sustainable growth rate by Higgins' model
Mean	5.939820884	0.066597069
Standard error	3.224465846	0.014083265
Median	0.209612278	0.019164249
Mode	N/D	N/D
Standard deviation	34.27654211	0.149707156
Variance of the sample	1174.881339	0.022412233
Kurtosis	66.51111531	19.31385803
Skewness	7.896072675	4.27556758
Interval	317.5999039	0.872624032
Min	9.60633E-05	4.17783E-06
Max	317.6	0.87262821
Sum	671.1997599	7.525468816

#### 4. CONCLUSIONS

The analysis has convincingly demonstrated that at present small business in the construction industry in Saint-Petersburg is not homogenous. It results from the large impact of noneconomic factors on the activity of the companies and their decisions. The only statistically confirmed dependence having general manifestation is high level of debt which is predominantly short-term and formed without bank loans. The most of small companies in construction branch of Saint-Petersburg has parameters much lower than those required to become medium-sized business and have no chance to achieve the upper borders of small business. Big values of sustainable growth rate are not achievable in practice because due to big proportion of debt in the balances of the companies the sustainable growth rates can't be implemented without risk of bankruptcy. The models of sustainable growth can be used by small companies in middle-term planning because they allow comparison of growth variants since they allow determining the growth opportunities not only from the existing, but also the planned values of parameters.

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## **TOURIST ARRIVALS IN POLAND AND REGIONAL DEVELOPMENT - A CASE STUDY OF THE POMERANIA PROVINCE**

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### **ABSTRACT**

*Tourism is an important economic sector for most developed countries in the world. The mechanisms occurring in Poland's modern tourist market are similar to those that are shaping international tourism. The economic effects of tourism as well as the environmental and social determinants of its development are noticeable both in the regional and global scale of the economic sphere. In 1950 the number of arrivals was 25.3 million, while in 2011 this number increased by 980 million. It is estimated that this number may increase by 1.56 billion by 2020. The aim of the survey presented in this paper is to identify the factors that affect the development of inbound tourism to the Pomerania Province in relation to the domestic tourist traffic after 2009. In order to achieve this aim, the following method has been used: analysis of literature and source materials containing data on the level and dynamics of tourist inbound traffic to Poland, with particular consideration of the Pomerania Province. The social and economic policy of the Pomerania Province has been assessed based on the analysis of the Province's strategy documents setting its social and economic directions of operation by 2020. It has been found that not only megatrends but also factors shaped by the regional social and economic policy have a dominant influence on the development and growth of inbound tourism to the Pomerania Province. An increase in the number of accommodation and improvement of accommodation standards are factors stimulating foreign travels to Poland through Gdańsk. The parallel influence of supply-related factors and factors creating an increase in demand makes that tourism development, due to favourable regional policy, is becoming an important determinant of the social and economic position of the Pomerania Province at domestic and international level.*

**Keywords:** *Pomerania Province, regional development, tourist arrivals*

### **1. INTRODUCTION**

Tourism is an important economic sector for most developed countries in the world. The mechanisms occurring in Poland's modern tourist market are similar to those that are shaping international tourism. As a human activity, tourism is naturally associated with factors of its production and the global population movement. The economic effects of tourism as well as the environmental and social determinants of tourism development are noticeable both in the regional and global aspect of the economic sphere. An increase in the number of arrivals that has been observed since the early 1950s proves, on the one hand, that the dynamics of tourist traffic development is high, on the other hand, that the effects of this phenomenon are notable. In 1950 the number of arrivals was 25.3 million, while in 2011 it increased by 980 million. By 2020 this number is likely to increase by 1.56 billion. In Europe, the number of international



tourist arrivals grew from 25.3 million to nearly 472 million in 2010 (Kachniewska et al., 2012, p.181) The increase in the level and dynamics of tourist traffic in the contemporary world is strongly conditioned by the continuous influence of factors that affect demand and supply, which can be categorised in many ways. The UNWTO, namely the United Nations World Tourism Organization, categorises the determinants of tourism demand into three groups: economic (general economic, income-related, price-related), social and psychological (free time, demography, industrialisation, urbanisation, culture, motivation), and supply-related, eg. tourism policy, transport, accommodation facilities, catering facilities (Kotra and Ruszkowski, 2012, p. 85-86). Another example of a classification divides demand factors in tourism development into economic, demographic, geographical, psychosocial, legal-political and media influence (Niezgoda, 2012, p.13). There is one more classification known as "tourism stimuli". It groups factors by significance. Such determinants are called megafactors. Those include (Kaczmarek, 2014, p.201-203):

- economic factors;
- social factors;
- political factors;
- tourism-related activities conducted by authorities;
- technical factors;
- ecological factors.

Inbound tourist traffic to a region is shaped by factors such as:

- external social and economic trends;
- social and economic policy of the region and activities of local government for the implementation of this policy;
- the scope and strength of cross-sector links which connect various entities to use new technological and organisational solutions for the improvement of the quality of tourism services;
- access to tourism values.

The dependencies above are used in the process of managing places of tourist reception (including entire regions) and may have synergic effects on an area – if the activity of science, businesses and local governments is defined as a system of co-dependencies and the aims are set jointly. External trends and regional social-economic policy shape the activity of entities providing tourist services and other cooperating entities; the results of activity of small and medium businesses in the tourism and non-tourism sector remain connected with their economic, social and political environment. The level and quality of these effects is a consequence of cross-sector cooperation on the creation of supply for tourist products and promotion of such products. The latter is significantly shaped by the tourist policy of local government in the region. The aim of the survey presented in this paper is to identify factors affecting the development of inbound tourism to the Pomerania Province in relation to the domestic tourist traffic.

## **2. DETERMINANTS OF TOURISM DEVELOPMENT IN POLAND**

The first main economic determinant that shapes an efficient demand for tourism is the income of the population since income determines the buying power of the population. Tourism expenditure are financed from the free decision fund, i.e. only if the lower needs have been satisfied. Sometimes in the market a situation arises when the consumer bears expenses on tourism from the basic consumption fund. The behaviours above are affected by fashion or the wish to be a member of a social group, e.g. a group of consumers who are interested in tourist products (Wolska, Hawlena, 2014, p. 6778). Changes made in the free decision fund affect the

structure of demand for tourist services. Luxury products are becoming increasingly popular (Koniczna-Domańska, 2014, p. 22). The distribution of income, which relates to the rationality of using financial surpluses, is also an important economic determinant. As regards economic determinants, a favourable economic and social situation is also important. It must be emphasised that this relation results from the fact that the tourism industry is flexible to changes in the general economic situation (Kaczmarska, 2014, p.202). Social factors are the second important group of determinants that have a direct impact on tourism development. The characteristics of the modern society are significant. The society is above all consumptive, efficient, mobile and educated. Its individual features affect tourism; they are reflected e.g. in the relationships between social and economic factors – an increase in the real income is a characteristic of prosperity in the society. This social structure supports economic growth where the goal is to consume (not to save) income. Also features such as mobility and education affect the increase in the demand for inbound tourism (Gaworecki, 2010, p. 108). Thus it must be emphasised that out of many social determinants, one of the most important is to treat inbound tourism as a symbol of social status. In this case tourism may also reflect the membership in social classes and strata. Tourism perceived in this way is the result of processes of imitation and the demonstration effect; people often show off to others with the number of countries they have visited or their frequent holiday trips or weekend trips. On the other hand, social roles make that people follow specific patterns of conduct, including purchasing attitudes. It must be pointed out that the roles that are fulfilled are closely connected with the social status which indicates the position one has in the society. In the context of tourist services, the structure of consumption will be different in the case of a director of a big company and an employee working in that company. An example that confirms these differences may be the role of an owner of a prosperous company. In the context of tourism and the demonstration effect, this role will be associated with choosing a prestigious place for holiday. Another example is a woman who wants to be a good mother. In order to achieve this goal, she will do her best so that her child can go on holiday, school trips, etc. (Niezgoda, 2012, p. 19). The third group of megafactors are political determinants defined as the policy of the government which is adopted in the country and which regulates each sphere of economic life through various activities. One of such activities is social policy. Legislation created by state authorities is important in this case. Legal provisions support or limit tourist activities both for citizens and foreigners. For example, the healthcare or public security system which affects the country's stability. Another political factor is fiscal and public finance policy. It is related to a great extent to tax burdens, customs, price regulations as well as the currency's stability in the global market. Economic policy is the third factor that plays an important role, mainly due to the fact that it affects the pace of economic growth, the increase in the real income of citizens as well as the investments which are supported by the State Treasury and which involve or are related to the tourism sector. As regards political determinants, we must also mention foreign policy which together with tourism is focused mainly on international agreements and the country's membership in organisations that regulate or facilitate tourist traffic (Kaczmarska, 2014, p. 202). Technical factors are another group of determinants affecting tourism development. Technology is particularly important for tourist companies, it mainly involves modes of transport, sending and processing data. These factors are also used by accommodation facilities which implement new architectural solutions and improve their fittings. Today the technological factor which has the biggest impact on the tourism industry is the development and use of IT technologies in the economy. Digitalisation of services as well as limiting, as a result, the demand for labour are important in this case. Virtual travel agencies are established more and more frequently, which makes that self-service is constantly developed (Dziedzic and Skalska, 2012, p.55-56). The group of megafactors which is associated with ecological activity is becoming increasingly important. The tourism sector, depending on the attractiveness of natural resources which

should be maintained in an intact condition, makes it necessary to implement the principles of sustainable development; this is a priority in policies of many countries (Kaczmarek, 2014, p. 203). The idea of tourism sustainable development covers three aspects: economical, ecological and social-cultural. The essence of this principle is the promotion and operation of tourism that is profitable in a long-term perspective, neutral to the environment and socially just. These three main goals combine the tourism economy, tourists and the community which takes tourists and the destination in which visitors arrive in one coherent whole (Kazmierczak, 2010, p.12) Apart from the factors that have a positive influence on tourism development, there are also factors that hinder this development, including an increase in prices, economic crises (Konieczna-Domańska, 2014, p.22), terrorism and natural disasters (Nowak and Herbuś, 2013, p.16). All these factors, both those which support and hinder tourism development internationally, affect the level and structure of inbound tourism to Poland as well as set Poland's place in the ranking of the world's most visited tourist destinations. In 2009 Poland was ranked 20th among the most visited tourist destinations (Table 1). In 2015 the tourist ranking of the world's most visited countries looked completely different. The TTCI Index, i.e. the Travel&Tourism Competitiveness Index created by the World Economic Forum, was significant in this case. It shows tourism competitiveness by country, so it is a tool used for monitoring tourism phenomena. According to this ranking, a rapid change occurred: Spain became the leader and France was ranked 2nd. Poland was ranked only 47th because of the intensification of tourist traffic to the countries of East Asia, among others.

*Table 1: Main countries of tourist reception in 2009  
 (Kachniewska, Nawrocka, Niezgoda, Pawlitz, 2012, p. 189)*

No.	Country	Number of tourist arrivals [in millions]	Revenue [in USD billions]	Expenses on foreign trips [in USD billions]
1	France	74.2	42.3	38.5
2	United States	54.9	93.9	73.2
3	Spain	52.2	53.2	16.9
4	China	50.9	39.7	43.7
5	Italy	43.2	40.2	27.9
6	United Kingdom	28.2	30.1	50.1
7	Turkey	25.5	21.3	4.1
8	Germany	24.2	34.7	81.2
9	Malaysia	23.6	15.8	6.5
10	Mexico	21.5	11.3	7.1
<b>20</b>	<b>Poland</b>	<b>11.9</b>	<b>9.0</b>	<b>7.3</b>

In 2015 the tourist ranking of the world's most visited countries looked completely different. The TTCI Index, i.e. the Travel&Tourism Competitiveness Index created by the World Economic Forum, was significant in this case. It shows tourism competitiveness by country, so it is a tool used for monitoring tourism phenomena. According to this ranking, a rapid change occurred: Spain became the leader and France was ranked 2nd. Poland was ranked only 47th because of the intensification of tourist traffic to the countries of East Asia, among others. The policy and promotion of individual countries, which is usually reflected in strategy documents for regional tourism development, affected these changes. An increase in tourist arrivals in a specific region generates additional revenue, whose dynamics in the first decade is shown in Figure 1.

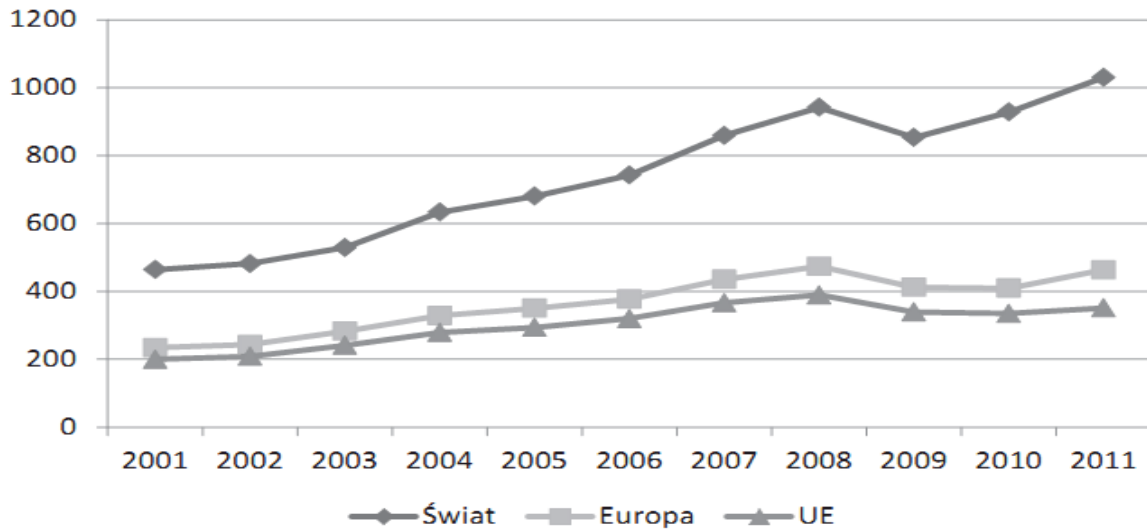


Figure 1: Revenue from international tourism in 2001-2011 (in \$ billions)  
 (Kurek, Waclawik, 2013, 16).

Tourism does not function as an independent, autonomous branch of the economy. It is tightly connected with transport, politics, culture, mass media and many other economic activities. The same factors that influence the development of this sector and function globally are very important for further tourism development in Poland. But their scale of influence is different. Poland can boast with a warm climate which is so desired by tourists – comparable, e.g., with Tunisia or Turkey. But Poland draws tourists' attention to a much greater extent because it is a region that is politically stable, free from terrorist threats and large-scale natural disasters (volcano eruptions, tsunami or droughts). An asset of Polish tourism is also the regionalisation and the traditional values of areas which are interesting for tourists as well as a high standard of services which is equal to competitors' offers - also foreign ones (Durydiwka, 2014, p.41-44).

### 3. DEVELOPMENT OF INBOUND TOURISM TO THE POMERANIA PROVINCE

Tourism in Pomerania is an important regional economic sector, in particular for creating workplaces. The Pomerania Province has favourable conditions for the development of any form of tourism (active, marine, health, agritourism). Pomerania's tourism attractiveness includes unique natural values such as vast forest areas, sea, lakes, and water routes. From the point of view of tourism attractiveness, an important element is rich cultural heritage such as monuments and cultural buildings. Both the development and tourist traffic focus on the marine zone, in particular on the Lake District and Tricity. It must be emphasised that tourist traffic in the Pomerania Province is clearly seasonal (summer peak); nonetheless Pomerania is among the most visited regions in Poland (Project..., 2006, p.13-14). Tourists are attracted to the Pomerania Province and Gdańsk by different motives. These motives are constantly changing. Nonetheless, the holiday motive dominates – both among Polish and foreign tourists (Table 2).

Table following on the next page

*Table 2: Reasons of tourist arrivals in Gdańsk in the 2nd quarter of 2014 [%]  
 (Podsumowanie badań. Turystyka gdańska w II kwartale 2014 r., Gdańska Organizacja  
 Turystyczna, Ośrodek Badań Społecznych INDEKS, Poznań 2014, p. 9)*

No.	Objective of the arrival	Home tourists	Foreign tourists
1.	Holiday	75.3	73.3
2.	Visiting	72.2	66.1
3.	Shopping	32.9	21.7
4.	Visiting relatives or friends	27.8	31.8
5.	Cultural, entertainment, sports events	No data	9.4

The number of provided accommodation as well as the number of accommodation users show a rising tendency (Table 3). In 2016, 8 518 852 beds were provided in total, including 1 250 852 to foreign tourists (Turystyka w województwie pomorskim w 2016 r.; 2017). The data also shows an increasing tendency of tourist traffic in the Pomerania Province and suggests that it is related to the social and economic development of this region. However, research must be conducted to confirm this suggestion because the available sources of data are fragmentary and are not a basis for a long-term forecast. The role of tourism in the development of the Pomerania Province is noticeable in the strategy documents of this region. The Pomerania Province Development Strategy puts a particular attention on partnership and cooperation as these are important determinants for the Province's social and economic development. The idea of cooperation is reflected, among others, in "transregional developmental projects" and priority 3, strategic goal 5 in the following wording: "A strong position and connections of the Tricity Metropolitan Area at transregional level, mainly at Baltic level" (Strategy..., p. 35 and p. 25 respectively).

*Table 3: Number of tourists and provided accommodation in Pomerania (in thousands)  
 (Turystyka w województwie pomorskim w 2010 r. Urząd Statystyczny w Gdańsku, Gdańsk  
 2011; Turystyka w województwie pomorskim w 2011 r. Urząd Statystyczny w Gdańsku  
 2012. Turystyka w województwie pomorskim w 2013 r., Urząd Statystyczny w Gdańsku,  
 Gdańsk 2014, Turystyka w województwie pomorskim w 2014 r., Urząd Statystyczny w  
 Gdańsku, Gdańsk 2015 Turystyka w województwie pomorskim w 2015 r., Urząd Statystyczny  
 w Gdańsku, Gdańsk 2016, Turystyka w województwie pomorskim w 2016 r., Urząd  
 Statystyczny w Gdańsku, Gdańsk 2017, Turystyka w 2011 r., GUS, Warszawa 2012, str. 36.)*

Year	Accommodation users	Provided accommodation
2009	1 610 730	5 801 913
2010	1 628 830	5 653 001
2011	1 661 540	5 689 466
2012	1 872 589	6 400 863
2013	1 966 831	6 546 610
2014	2 197 688	7 093 131
2015	2 439 185	7 880 472
2016	2 620 573	8 518 852

The need to cooperate and improve subregional development centres (Strategy... p. 27) indicates that the significance of connections between various entities is perceived as a condition for implementing the goals; however, cross-sector cooperation is still not valued enough (Marciszewska, 2011, p. 287). Researchers see the special role of partnership and cooperation for the region – in many aspects. Wanagos (2011, s. 546) notes that the ability of cooperation between different entities "...favours the improvement of attractiveness of an area

and the creation of a positive image", highlighting, e.g. the need and role of cooperation between local and economic authorities in the region. A similar relationship may be observed in the tourism development strategies of cities and regions in Poland. When referring to the tourism development strategy for the City of Przemyśl for 2008-2015, Szopiński (2011, p. 1003) says that "...activities relating to tourism development aim to build the city's tourist brand..." On the other hand, we observe the relationship between the development of individual economic sectors and spatial changes. Zmysłony (2011, p. 1062) indicates that "...spatial metropolisation, which is related to globalisation and which involves a rapid increasing importance of big municipal layouts [...], has a significant impact on tourism development". The policy of local governments plays a significant role in establishing and implementing cooperation in various fields of social and economic life. Komorowski and Pietkiewicz (2011, p. 472) say: "The municipal and commune authorities at Gdańsk Bay: Gdynia, Hel, Jastarnia, Władysławowo, the city of Puck, the rural commune Puck and Kosakowo, intending to attract sailors from all Baltic countries, [...] decided to prepare a joint project involving the tourism development of the coastline". This project would have had smaller chances of success without this initiative, and therefore the scope and pace of preparation of the Pomerania Province to taking tourists-sailors at Gdańsk Bay would probably have been lower. The Pomerania Province actively participates in the tourist policy of the Baltic Sea Region. Studzieniecki (2016, p.236) stresses: "The Baltic Sea Region is a unique EU macroregion. The concept of macroregion historically precedes its relatively recent emergence as a notion and an instrument of European Territorial Cooperation (ETC)". This is also an instrument for tourism development in the Region.

#### 4. CONCLUSIONS

Although tourism as a social and economic phenomenon is a subject of many academic discussions, various aspects of this human activity still require more research and an in-depth analysis, in particular at regional level. On the one hand, academic literature gives sufficient attention to megatrends and local factors determining tourist arrivals in the place of tourist reception; on the other hand, the dynamics of national and regional development creates new challenges which make it necessary to update research on specific spheres, including tourism in relation to many issues. These include cooperation between entities in the tourism and non-tourism sector as well as local tourist policy. Current Polish tourist research at regional level provides the minimum of information needed for the optimization of tourist offers, but it does not give any grounds for a long-term forecast concerning changes both in the tourism sector and its relations with other economic branches. Even megatrends are not always reflected in regional strategy documents, including those about the future changes in tourist arrivals in a specific area. A closer cooperation (on all projects) between academic-research institutions, different types of tourist entities and local governments may be a gradual solution of this problem.

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## THE THREE SEAS INITIATIVE AS A NEW IMPORTANT FACTOR IN THE INTEGRATION OF CENTRAL AND EASTERN EUROPE

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### **ABSTRACT**

*The first initiative for the creation of a close economic and political cooperation between Central and Eastern European countries was undertaken several years after World War I as a response to immediate threats from the two major totalitarian countries – the Nazi Germany and Soviet Russia. The Central and Eastern European countries, which were eventually supposed to unite into federation, were thought of as a potential barrier separating Moscow from Berlin. Lack of agreement in the matter, followed by the outbreak of World War II, put the end to these plans, but the idea of creating a coalition in this region was reborn over a year ago in Dubrovnik, Croatia. There, on 25<sup>th</sup>-26<sup>th</sup> August, 2016, on the forum of the Three Seas nations, a declaration of cooperation was signed, which laid the conceptual foundation of the possible future shape of the union. The declaration was key since it was signed by officials representing all twelve nations which are to be part of the possible alliance. The Three Seas Initiative was then described as an informal platform from which to gain political support and organize action towards specific projects, both on the scale of the entire region and transboundary, strategic to countries involved in energy, transport, digital communication and economic policies within Central and Eastern Europe. In the time of Germany's political domination of the European Union and the Russian Federation's aggressive imperialistic aspirations, the old initiative from the interwar period has gained new reasons for its development. It also received strong political support from the president of the United States Donald Trump during his visit in Warsaw, Poland, in July 2017. Presently, the Three Seas is but a handful of socio-political and economic projects to be realized in the near future. In the face of increasing tensions and open conflicts within the European Union, however, the intended cooperation initiative may soon become and institutionalized reality with the paramount goals of shifting the balance of power and changing the geopolitical situation in Europe.*

**Keywords:** *integration, Central and Eastern Europe, Croatia, Poland, Three Seas Initiative*

### **1. INTRODUCTION**

The ideals behind the European Union, based on the principles of unity and solidarity, are currently in a crisis. It is due to several basic factors:

- 1) The financial debt and the economic collapse of the Republic of Greece.
- 2) The financial crisis of the eurozone.
- 3) National sovereignty and democracy being replaced by the ubiquitous and ever-progressing 'eurocracy'.
- 4) The dominating political presence of Germany in comparison to other countries.
- 5) Brussels' incorrect stance on the problem of hundreds of thousands of illegal immigrants and lack of potential solutions.
- 6) The European Committee treating most Central and Eastern European countries as inferior members of the federation.
- 7) Failure in the efforts to prevent Brexit.
- 8) The Berlin-Paris axis's idea of building a two-speed Europe.

These are but a few reasons which contributed to the difficult situation in which the European Union found itself at the end of the second decade of the 21<sup>st</sup> century. The impasse within the integrated group did not emerge suddenly, but rather developed over the span of many years. It laid bare the weakness of the current structures, which proved completely incapable of rebuilding themselves and conducting the required reforms. The faith in building a 'common European home' has been shaken by the erosion of traditional values and principles. It led to the emergence of centrifugal movements attempting to create new state organisms – entirely sovereign and independent of previous power centres. The recent examples of independence struggles by Catalonia, Scotland or the Basque Country have become symbolic of these movements. Interestingly, these separatistic tendencies occurred mostly in the Western Europe. Furthermore, the countries of Central and Eastern Europe – in opposition to the 'Old Europe' – noticeably harbour very definite and strong integrative tendencies simultaneously. However, the extent of this tightening of bonds and extension of cooperation is limited to these countries' own circle. As examples of such tendencies and activities one could offer the recently intensified activities by the Visegrad Group, which is at this point over a quarter century old, as well as the Three Seas Initiative, a relatively recent development. The latter (also referred to as the BABS Initiative: the Baltic, Adriatic, Black Sea) has been created to help construct a political platform to unite Central and Eastern Europe through the following: strengthening political bonds, facilitating transborder cooperation and, in the future, creating an opportunity to accomplish large-scale Europe-wide projects intended to stimulate balanced economic growth in the entire region. The Initiative includes twelve member states of the EU situated between the Baltic, Adriatic and Black seas.

## **2. HISTORICAL ATTEMPTS TO CREATE A UNITED EUROPE**

The matter of attempts at unifying Europe, when viewed from a historical perspective, requires it to be strongly stressed that the idea of uniting many countries in an endeavour to create a single supranational structure has been present both in the Western and Eastern Europe for a very long time. However, while information about the unification idea in the West is practically common knowledge, there is a noticeable and very unfortunate gap in the awareness of similar attempts made in Eastern Europe. If it is to be closed, a summary of some information regarding the topic at hand should be provided. There have been efforts to unify Europe ever since the ancient times, and early example being the Roman Empire. During its peak, it ruled the European lands from Spain to the Caucasus, as well as the west coast of the Caspian Sea, and from most of Britain to Malta in the Mediterranean, as well as large territories in North Africa and in the Near East. Everything began in antic Rome. In 395 AD Emperor Theodosius I divided his Empire between his two sons and as a result two separate nations were born: the Western Roman Empire and the Eastern Roman Empire, whose capitals were Rome and Constantinople, respectively. The territories of the Western Roman Empire included Western Europe and the western Mediterranean coast, while the Balkan region and – approximately – the Near East along with today's Egypt. There are several hypothetical reasons why Rome did not expand to modern-day Central Europe – east of the river Rhine line and north of Danube. One possible reason posited by modern historians was that these lands were occupied by strong nation-states and they which proved a resilient barrier against new territorial conquests by Rome and Constantinople. Sources claim that areas to the east of the Rhine were inhabited by ferocious and brave Germanic tribes and territories to the northwest of Danube belonged to a country dubbed the European Scythia (Bieszk, 2015). Such theories are not supported by official historiography, which instead follow the formal historic doctrine promoted by German scholar's circles, which proclaims that the territories of modern Poland, Belarus, Ukraine and the Baltic countries used to be inhabited by tribes of Germanic origin.

The next important attempt at unifying Europe was undertaken by the Holy Roman Empire - the self-styled successor to the Western Roman Empire, which existed from the 10<sup>th</sup> century AD until 1806, when it was made a French protectorate by Napoleon. In its peak, i.e. between 962 and 1378 AD, the Holy Roman Empire consisted more or less of the territories of modern Austria, Belgium, the Czech Republic, the Netherlands, Luxembourg, Germany, Slovenia, Switzerland, eastern France along with Corsica, northern Italy along with Sardinia, southwest Poland, and a tiny fragment of modern Croatia (Istria). The next unification attempt was made in the time of Napoleon. This Corsica-born commander, and exceptionally competent tactician, crowned himself Emperor of France in 1804. Beside France, several subordinate lands were part of his Empire, among them: the Confederation of the Rhine (i.e. the confederation of German countries), the Duchy of Warsaw, the Kingdom of Spain, Kingdom of Italy, the Kingdom of Naples and the Batavian Republic, a puppet state located in modern Netherlands. The Empire fell apart after Napoleon's defeat, but while it existed, it was home to over 60 million people included land from the Mediterranean to the North Sea and from the Baltic Sea to the Atlantic. Yet another time there was an effort to create a Europe of common values and principles was during the time of the Third Reich, but after the Second World War, institutions were established in order to prevent another rise of German industrial power and militancy. As it had already started a global conflict twice, and its economic potential was on the incline once more, a solution was devised – France was to keep it in check, while at the same time Germany would be integrated into the post-War Europe's economic structures. The signing of the Treaty of Paris in 1951 marked the first steps of the integration. Six parties were its signatories: France, the Federal Republic of Germany, Italy, the Netherlands, Belgium and Luxembourg. The agreement established the European Coal and Steel Community and was to last for fifty years from July 1952, terminating in 2002; five years later, two more agreements were signed in Rome, and as a result of this so-called Treaty of Rome, two organisations started functioning beginning 1<sup>st</sup> January 1958: the European Atomic Energy Community (Euratom) and the European Economic Community (EEG). Six countries became members of these organisations: France, Germany, Italy Belgium, the Netherlands and Luxembourg. Euratom's purpose was to unify the members' efforts in peaceful nuclear research and to develop nuclear industry at the same time. The European Economic Community was called in to existence to create a common market within the following dozen years – a market operating under unified transport, agricultural and customs policies. Despite the best intentions, the desired changes happened at a fairly slow rate, mainly deterred by high unemployment rates and stumped economic growth in the 1970s and 1980s. The common political sentiment at the time included the feeling of lack of a dominant political idea, as well as evident impotence of administrative structures and economic stagnation. Consequently, radical reforms were commonly perceived as the solution to this problem – reforms focused on creating a common market with a single currency. It was not before the final decade of the 20<sup>th</sup> century that such changes were introduced; the transformation of Europe began in the Dutch city of Maastricht with the signing of an agreement known as the Treaty on European Union. It was an international agreement, initialled in December 1991 and signed two months later. It was signed by Belgium, Denmark, France, Greece, Spain, the Netherlands, Ireland, Luxembourg, Portugal, the Federal Republic of Germany, Great Britain and Italy and concerned the already existing structures of the European Economic Community, transforming it into the European Community (EC) and also established the European Union (EU) which in the future was to be a voluntary economic and political union of the democratic European nations. On 1<sup>st</sup> December 2009, the European Union completely took over the European Community's duties and authority as an international organisation,. The ever-growing union, regularly accepting new members, was 28 countries strong by January 2007. It was then that the dream of a united Europe,

stretching from the Atlantic to the Black Sea and from the Mediterranean to the North Sea, came true. At the same time when in the West of Europe unification was taking place, the same happened in Eastern Europe to a similar degree. History has trouble remembering the unification efforts of the East only because of the dominance of Western European historians, especially German, but indeed Central and Eastern Europe harboured many similar sentiments. Beside the already-mentioned example of the European Scythia, the first serious attempt at creating a major state organism was the Great Moravian Empire – a state which existed from the beginning of the 9<sup>th</sup> century AD until the 10<sup>th</sup> century AD. It was then wiped out from the map of Europe after the nomadic Hungarians invaded it. The Great Moravian Empire united mostly Slavic nations living over an enormous stretch of land including the territories of the modern Czech Republic, Slovakia and Hungary, southern Poland (Zerelik, 2002), a large portion of western Ukraine, northern Croatia, the northern part of Slovenia, a portion of western Germany and western Austria, a fragment of western Romania and a small chunk of northern Serbia (Davis, Moorhouse, 2002). The entity, although it did not last a long time, established the exemplary attitude of tolerance for other Christian denominations in countries such as Poland and the Czech Republic, a sentiment which has lasted for centuries since (Polek, 1994). It also introduced the principle of dynasticism, became one exemplar of modern administrative structure for many nations in the region. Another Central European state organism uniting a number of nations while maintaining religious tolerance for non-Catholics was the Polish-Lithuanian Commonwealth. A treaty signed in 1569, known today as the Union of Lublin, established a state over the territories of the Crown Kingdom of Poland and the Grand Duchy of Lithuania (Przygoda, 2013). The two countries were in a real union which established a common ruler, coat of arms, parliament (*sejm*) and currency. While the nations maintained a common foreign and defensive policy, they kept separate treasuries, administrative offices, armies and judiciary systems. The Polish-Lithuanian Commonwealth occupied over 1 million km<sup>2</sup> of land, making it the largest European Christian nation of its time. Its territory stretched from the shores of the Baltic Sea to the area of Crimea in today's Ukraine. During its peak, the Commonwealth was a place of religious tolerance, popularisation of arts and sciences, as well as civil liberties for the gentry (*szlachta*). It lasted for over two centuries until 1795, when it fell apart, partitioned by Austria, Russia and Prussia. Until its fall, the Commonwealth was home to over twenty nations and accepted adherents of all denominations of Judaism, Christianity and Islam. As such, it is comparable to the modern-day European Union in its cultural, political and civilisational potential and its integrative power (Samsonowicz, 2012). There were more unions in Eastern Europe. From 1092 to 1541, the Kingdom of Hungary was one of the most important countries of Central Europe and in 1400, its territory spanned from western Ukraine and Transylvania in central Romania to the Dalmatian coast and from western Poland to northern Serbia. The Crown of the Kingdom of Poland and the Kingdom of Hungary were in a personal union under the Habsburg dynasty between 1370 and 1382, which made it the largest state organism of the 14<sup>th</sup> century Christian Europe. Much later, in 1867, as a result of a treaty between Austria and Hungary, the Austrian Empire was transformed and the two countries formed a real union under the rule of the House of Habsburg. They were also in military, monetary and customs unions. The Austro-Hungarian Empire was a multinational constitutional monarchy and before its fall in 1918 it was not only the greatest military and political force in Central Europe, but also in the world. The area of the territories of the Empire was 677 000 km<sup>2</sup> and before World War I it was home to nearly 53 million people of over a dozen main nationalities, several dozens of languages and various faiths. In the beginning of the 20<sup>th</sup> century, reforms were planned and attempts made to modify the structure of the nation to counteract the ossification of its monarchical and bureaucratic structures, as well as dangerous centrifugal tendencies.

As can be seen, the Austro-Hungarian Empire was strikingly similar to the European Union as well. After the end of World War I, independent nations arose from the ashes of three great European powers: the Austro-Hungarian Empire, Prussia and the Russian Empire. Central Europe had no state organism large enough to inspire and conduct the process of integration of the many small countries. However, Soviet Russia proved an ideological and military danger for the entire region and so did the aggressive fascism of Germany. Central Europe's enormous eastern neighbour, under fanatical rule, was openly attempting to impose itself upon the newly created countries. Similarly, both the Weimer Republic and – later – the Nazi Germany did not hide their aspirations to power and territorial claims towards the Lebensraum occupied by their closest neighbours. This situation bore a need to join forces and resources of Central Europe to protect its interests and decisively counteract the two inconvenient and aggressive neighbouring powers' attempts against it. At the start of the 20<sup>th</sup> century, another political and military alliance was created, this time between Czechoslovakia, Yugoslavia and Romania was formed, called the Little Entente. In the later years of its existence, its goals were to coordinate the short- and long-term foreign policies of its members, as well as to raise the importance of the alliance's motions on the international arena. In the second half of the 1930s, as a result of hostile and ever-intensifying actions of Hitler's Third Reich and Mussolini's Italy, the alliance nearly completely fell apart, truly ending in September 1938 with the signing of the Munich Agreement. Despite dramatic attempts to endure, Czechoslovakia – the subject of the agreement – lost a large area of its territory as well as sovereignty. The Polish concept of Miedzymorze also gained some popularity before WWII. The Polish name Miedzymorze, (Polish: między – between, among, morze – sea, literally 'between-seas'), was rendered into Latin as Intermarium (Piesakowski, 1999). It was a plan pursued after WWI by the Polish leader Jozef Pilsudski (Billington, 2004), and aimed to create a federation of Central and Eastern European countries. The Baltic states (Lithuania, Latvia, Estonia and Finland) were invited to join the alliance and so were others: Belarus, Ukraine, Hungary, Romania, Yugoslavia and Czechoslovakia (Roshwald, 2001). This union was supposed to resemble the Polish-Lithuanian Commonwealth, which, stretching from the Baltic Sea to the Black Sea from the end of the 16<sup>th</sup> century to the end of the 18<sup>th</sup> century, had once united the Kingdom of the Crown of Poland and the Grand Duchy of Lithuania (as already mentioned). However, the desired union, which was to help the united Slavic nations dominate, never came to pass. In the 1930s, efforts in this regard were thwarted by the Czechoslovakian's government and president's stance, which was opposed to any offers of closer cooperation with Poland. This was in conjunction with Czechoslovakia's very good political relations with Germany. No deal was made despite interest for a Warsaw-Prague agreement from Budapest as well. The outbreak of WWII and the German aggression put an end to any plans of agreements or short- and long-term alliances between the countries of Central and Eastern Europe, and the matter became even more complicated after the war. After the end of WWII, Europe was split into two opposing political and military camps, divided by the so-called Iron Curtain. The east became a collective of satellite countries subservient to Moscow and at the same time economically close to one another. The economic cement of this bloc was the Comecon, while the Warsaw Pact united them in their defence policies and forced loyalty of each towards the entire group. Central and Eastern Europe was inducted for decades into the area of influence of the Soviet Union, which included territories from the river Elbe to the eastern coast of the Black Sea and from the southern part of the Balkans all the way to the lands past the Arctic Circle bordering Norway. It was only with the dissolution of the Soviet Union in 1991 that the former countries of the Eastern Bloc were able to reclaim full sovereignty and attempt again to integrate the Central and Eastern European region. These efforts yielded fruit in 1991, when the Visegrad Group was created, consisting initially of Czechoslovakia, Poland and Hungary. In 1992, due to the Velvet Divorce

between Prague and Bratislava, the Group has become what is now also known as the Visegrad Four or V4 – a cultural and political alliance of four Central European states, i.e. the Czech Republic, Hungary, Poland, and Slovakia. The impulses for establishing close cooperation as part of a regional union included geographical proximity, similar historical backgrounds, and compatible foreign policy goals. In the early 90s, joining the European Union and NATO were considered top priorities. After the success of the Visegrad Four's members in integrating with the European Union and NATO, the group set itself new directions. Cooperation with the closest neighbours, i.e. Ukraine, Croatia, Slovenia, Lithuania, and Austria, was extended. Also, contacts were established with institutions of Western European states, including the Benelux and the Nordic Council states. However, it seems that the most important goal of V4 today is to have a more significant and consistent influence on the policies of the European Union. In particular, this includes opposing authoritarian inclinations of the German and French politicians to force their points of view on other countries. Successes in this respect, have made the Visegrad Group a permanent member and important player of European policy and an effective instrument of political and economic strategy of Central European states (Przygoda, 2017). The newest project concerning the region in question is the Three Seas Initiative. It is designed to create a solid bloc of a dozen or so countries, held together by close economic cooperation and the idea of making bold, large-scale investments.

### **3. HOW THE THREE SEAS CAME TO BE**

The first initiative meant to create a formal platform for political and economic cooperation between the nations of Central and Eastern Europe was set up immediately after the end of WWII. It is believed that its founder and chief supporter was Jozef Pilsudski, Polish Chief of State (1918–22) and prime minister (1926–28 and 1930). The political concept, called *Miedzymorze* at the time, and better known in English as *Intermarium*, entailed the creation of a federation of Central and Eastern European countries. Ultimately, it was to unite the entire region between the Adriatic, Baltic and Black seas, consisting of Poland, Lithuania, Latvia, Estonia, Belarus, the Ukraine, Czechoslovakia, Hungary, Romania and Yugoslavia, and eventually Finland as well. The *Intermarium* was meant to include a maximum of ten to eleven countries and its main aim was to counteract immediate threats facing member nations from totalitarian countries – Germany and Soviet Russia, to act as a sort of barricade between Moscow and Berlin and prevent these two politically aggressive countries from attaining a common border. The *Intermarium*, however, was perceived by some Lithuanians as a threat to their independence, by Czechs and Slovaks as a potential impediment to their common country's sovereignty, and the sentiment was similar in the Ukraine. The idea's opponents imagined it as an attempt to recreate the Polish-Lithuanian Commonwealth with a dominating governance from Warsaw. It was also strongly contested by Russia and Germany, as well as most Western powers except for France (Nowak, 2008). Since the parties involved could not come to an agreement, and as the world was again engulfed in a global conflict, all plans came to a halt. Within two decades, all the countries which had been viewed as potential candidates for membership in the federation of *Intermarium* had fallen into the dominance of the Soviet Union or Nazi Germany – all except for Finland, which nonetheless suffered immense territorial losses during the Winter War (1939–40) against the Soviet Union. The desired union, which was to help the united Slavic nations dominate, never came to pass. The only faint echo of the alliance was the post-WWII national anthem of the Socialist Federal Republic of Yugoslavia, uncannily similar to the Polish anthem (Przygoda, 2017). The idea to unite Central and Eastern European countries into a solid bloc of economic and political cooperation fortunately survived the times of change which took place in this part of Europe over the last decades. As a result of both the fall of the Soviet Union and the dissolution of Yugoslavia, turbulent and dramatic events took place in the region. The old concept

of unification, this time under a new name – The Three Seas Initiative – reappeared in the international political scene at the end of September in 2015 as a result of the meeting of the presidents of Croatia and Poland – Kolinda Grabar-Kitarovic and Andrzej Duda respectively – which took place in New York. They had the opportunity to raise the subject of the Three Seas during their official addresses to the United Nations General Assembly. In a separate meeting, the Assembly agreed to an attempt at creating a new, large-scale political and economic platform to span the countries between the three seas. The president of Croatia, Kolinda Grabar-Kitarovic, was both the originator of the federation and the main initiator for its new political and economic structures (Grabar-Kitarovic, 2015). The resolution, decisiveness and determination of the Croatian stateswoman has erected entirely new values in Central and Eastern Europe and made Croatia the unofficial leader of the entire Balkan region. Poland was to be a northern buckle fastening the structure.

#### **4. THE AIMS OF THE THREE SEAS**

The Three Seas Initiative aims for a closer cooperation between the countries of Central and Eastern Europe, especially in the areas of transport infrastructure, power engineering, digital communications and trade. Participating countries include the four members of the Visegrad Group and Austria – politically and economically close to them – as well as the Baltic and four Balkan countries between the Black Sea and the Adriatic Sea. The Three Seas is most of all a great modernisation initiative for this part of Europe. As a result of the previously-mentioned actions, there should be a quick increase of the region's competitive value, and the project is meant to increase the unity of the countries in the common market. One of Three Seas' main goals is to achieve the level of international relationships already present among the nations of Western Europe. The project is also about modifying the established directions of the flow of migrants, capital, resources, goods and services. The direction of trade, hitherto horizontal (East-West), is to be replaced with a system of north-to-south vertical connections and relations. Should these aims succeed, there would be a new and powerful political counterweight to the Paris-Berlin axis. It would also make the countries within the alliance more politically and economically independent of their powerful neighbours – Russia and Germany. The Three Seas Initiative is also, in a sense, its proponents' response to the idea of two-speed Europe, a realistic alternative for the nations outside the core of the EU. It is currently the main stage for cooperation in several areas and in some future projects, and although currently it is not officially discussed, new avenues of collaboration may well emerge as the project develops: common scientific research across several disciplines, cultural and educational cooperation, closer partnership in defence policy, establishing external trade connections as a single integrated whole or developing the aims of a common foreign policy.

#### **5. MEMBER STATES**

Twelve countries have been actively interested in building new political and economic structures in Central and Eastern Europe. These are Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia and Romania, all of them members of the EU. After both of the Three Seas summits so far – in Dubrovnik (2016) and in Warsaw (2017), the participants made important declarations, most significantly that the Three Seas is not an alternative or a competitor to the EU and neither does it represent a threat to its unity. All official statements always highlight the fact that the idea is an attempt to better utilise the entire region's potential and make the effort to strengthen some economic bonds between given countries. An integrative perspective on the enterprise suggests it may not be a simple matter, since there are significant differences between member states which may impede the project's success.

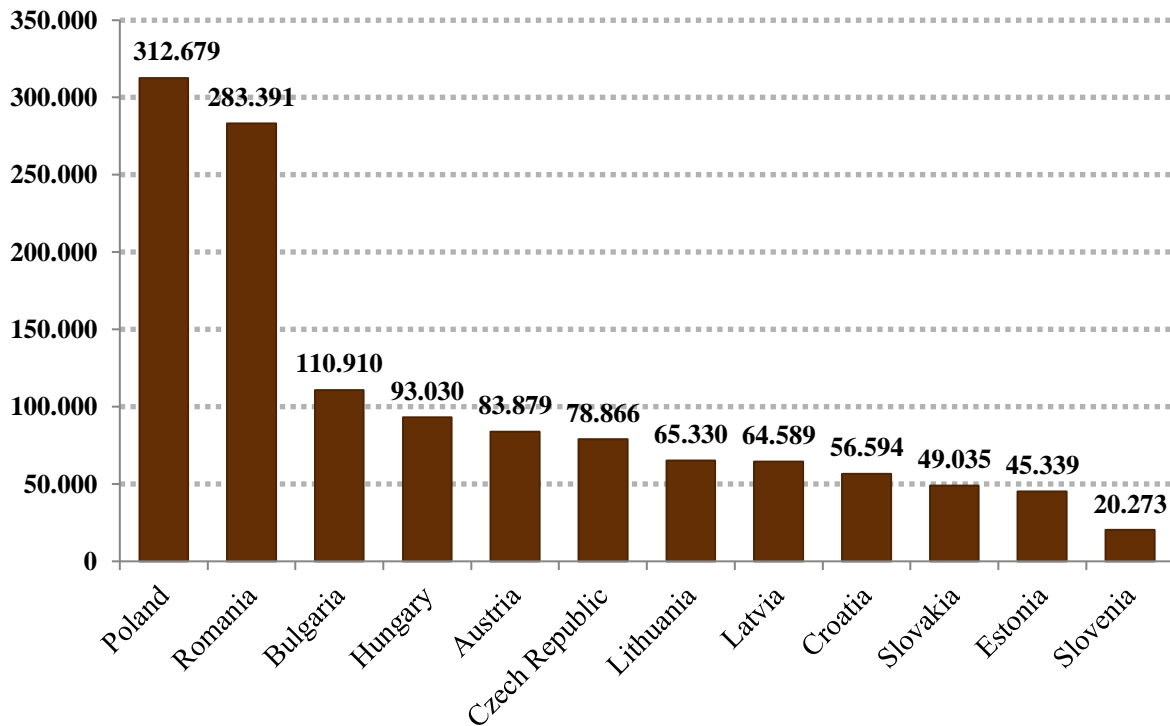
Table 1: Fundamental information and statistical data about the countries of the Three Seas Initiative (2016) (<http://ec.europa.eu/eurostat>)

No.	Country	Political system (government)	Population (in mln)	Total area (in km <sup>2</sup> )	Capital (population in mln)
1.	<b>Austria</b>	federal parliamentary republic	8.77	83,879	Vienna (1.879)
2.	<b>Bulgaria</b>	unitary parliamentary constitutional republic	7.20	110,910	Sofia (1.260)
3.	<b>Croatia</b>	unitary parliamentary constitutional republic	4.15	56,594	Zagreb (0.807)
4.	<b>Czech Republic</b>	unitary parliamentary constitutional republic	10.55	78,866	Prague (1.280)
5.	<b>Estonia</b>	unitary parliamentary constitutional republic	1.31	45,339	Tallinn (0.447)
6.	<b>Hungary</b>	unitary parliamentary constitutional republic	9.83	93,030	Budapest (1.759)
7.	<b>Latvia</b>	unitary semi-presidential parliamentary constitutional republic	1.95	64,589	Riga (0.641)
8.	<b>Lithuania</b>	unitary semi-presidential republic	2.82	65,300	Vilnius (0.574)
9.	<b>Poland</b>	unitary parliamentary republic	38.45	312,679	Warsaw (1.754)
10.	<b>Slovakia</b>	parliamentary republic	5.43	49,035	Bratislava (0.423)
11.	<b>Slovenia</b>	unitary parliamentary constitutional republic	2.07	20,273	Ljubljana (0.277)
12.	<b>Romania</b>	unitary semi-presidential republic	19.64	283,391	Bucharest (2.106)

First of all, there is a slight difference in the system of government between the project participants. They are mostly unitary, but in the case of Austria the system is federal. In some states, the president is an important figure and can directly influence on internal and external policies; in others, the president's role is mostly representative and most matters are decided by the government and parliament. All twelve nations are republics, but with very different experience in establishing democracy and following its principles. The area of the countries is also very diversified. For example, the tiny Slovenia is fifteen times smaller than Poland and fourteen times smaller than Romania (Fig. 1). This is directly correlated with the abundance of natural resources, for instance, which is clearly the greatest in the largest countries and significantly smaller in those covering a lesser area.



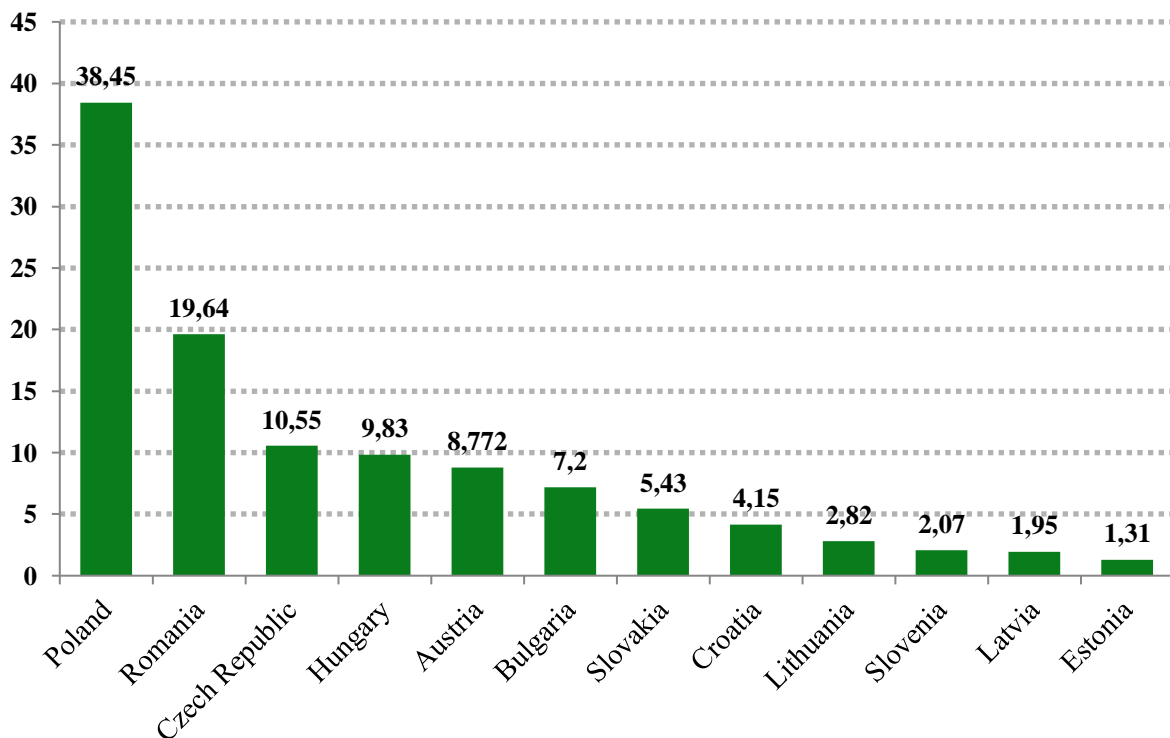
Figure 13: Total area of the countries of the Three Seas Initiative in descending order



Although most of the countries have access to the sea, four of them – namely Austria, the Czech Republic, Slovakia and Hungary – do not have a coastline.

The population figures also vary across the Three Seas nations. Next to the human capital rich countries such as Romania and Poland, there are those undergoing rapid depopulation, with a limited number of citizens, such as Lithuania, Latvia, Estonia and Slovenia (Fig. 2).

Figure 14: Population of the countries of the Three Seas Initiative in descending order



Comparing select economic data also shows how bumpy the road to successful integration can be for the BABS countries.

*Table 2: Basic economic indicators for the Three Seas countries (2016 and 2017)*  
 (<http://ec.europa.eu/eurostat>)

No.	Country	Currency	GDP (nominal)		Unemployment rate (%)*	Inflation rate (%)**
			Total (in bln. US \$)	Per capita (in US \$)		
1.	Austria	euro (EUR)	387.30	44,561	5.6	2.1
2.	Bulgaria	lev (BGN)	52.39	7,377	6.1	0.7
3.	Croatia	kuna (HRK)	51.95	12,405	10.5	1.5
4.	Czech Republic	Czech koruna (CHZ)	196.07	18,534	2.7	2.4
5.	Estonia	euro (EUR)	25.68	19,618	5.4	4.2
6.	Hungary	forint (HUF)	132.03	13,459	4.2	2.7
7.	Latvia	euro (EUR)	30.18	15,403	7.9	3.2
8.	Lithuania	euro (EUR)	46.67	16,443	7.7	4.6
9.	Poland	zloty (PLN)	509.96	29,250	4.6	1.4
10.	Slovakia	euro (EUR)	89.13	16,412	7.2	1.6
11.	Slovenia	euro (EUR)	48.08	23,276	6.4	1.4
12.	Romania	Romanian leu (RON)	197.00	10,097	5.0	0.6

\* *Unemployment rates, seasonally adjusted, September 2017 from:*

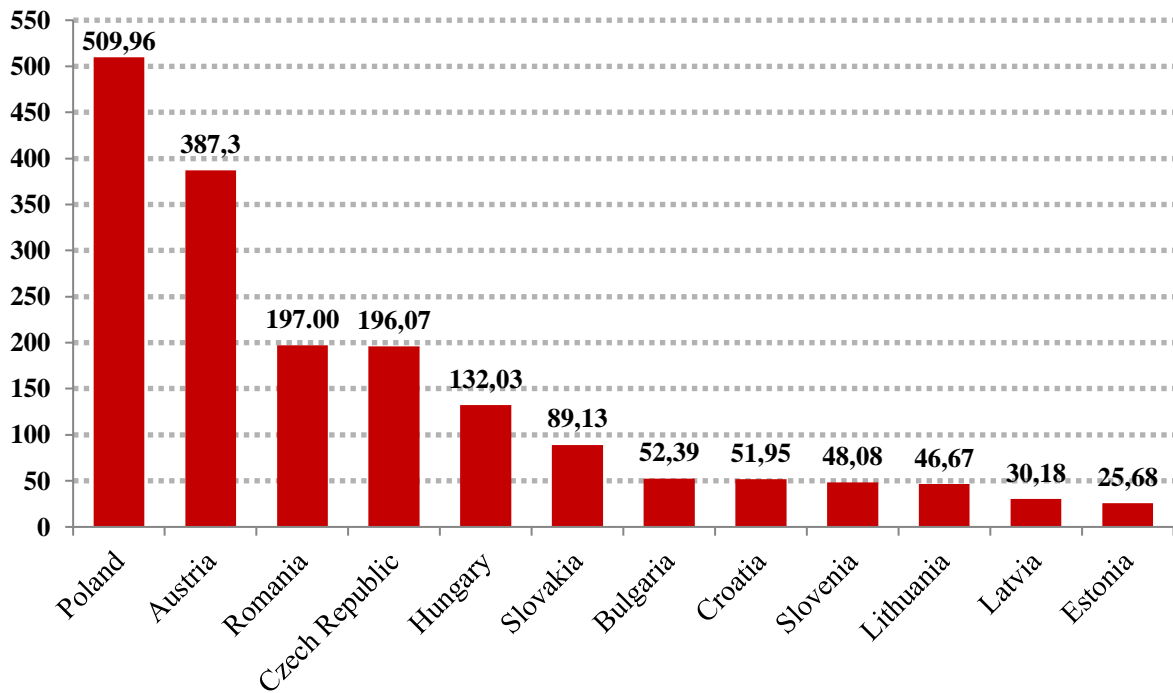
[http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Unemployment\\_rates,\\_seasonally\\_adjusted,\\_September\\_2017\\_\(%25\)\\_F2.png](http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Unemployment_rates,_seasonally_adjusted,_September_2017_(%25)_F2.png)

\*\* *Annual inflation rates (%) in August 2017 from:*

<http://ec.europa.eu/eurostat/documents/2995521/8230235/2-18092017-AP-EN.pdf/25d25d75-d663-4fa8-8f6a-13c47b4ceb8b>

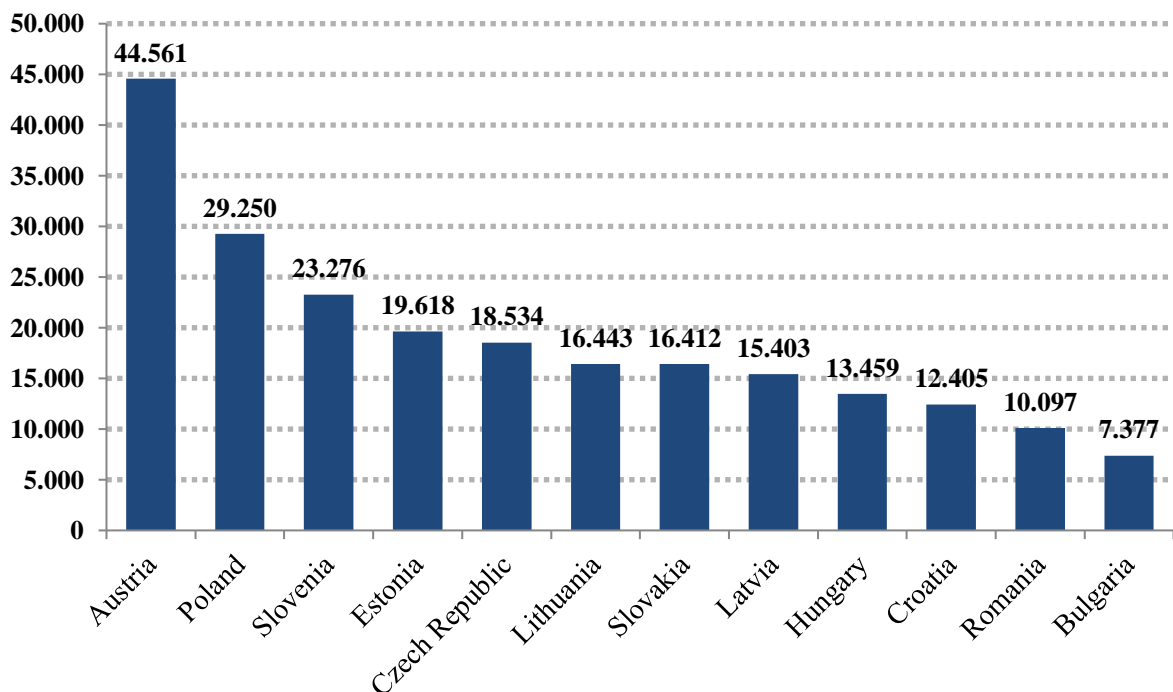
When one considers the data from *Table 2*, a great disproportion in terms of the total GDP stands out. There is a monumental chasm in the economic potential between, for example, the leaders in this statistic: Austria, the Czech Republic, Poland or Romania, and the countries closing the list – Estonia and Latvia (*Fig. 3*).

Figure 15: Total nominal GDP of the Three Seas countries in descending order



Taking GDP per capita into account (Fig. 4) allows one to draw reasonable conclusions about the standard of living in a given country. Austria is the definite leader of this comparison, followed by Poland, while Croatia and Romania, whose figures are three or four times worse, are at the end of it.

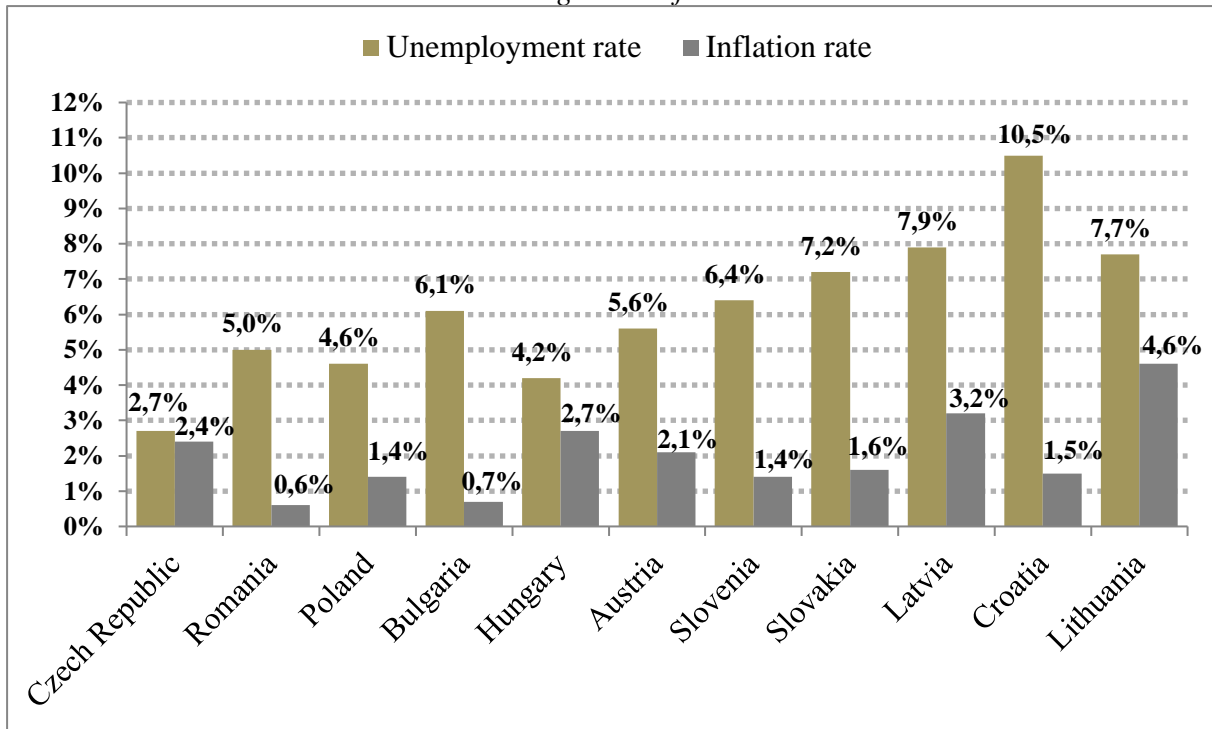
Figure 16: GDP per capita of BABS countries in descending order



Considering the unemployment rates and inflation rates can also lead to some conclusions about the state of each country's economy. Poland, Romania and the Czech Republic certainly

look the best in this light, while the Adriatic nations, Croatia, as well as all the other Baltic countries – Estonia, Latvia and Lithuania – are much worse off (Fig. 5).

Figure 17: Unemployment and inflation rates of the nations of the Three Seas Initiative, in ascending order of their sum



In total, the countries united by the idea of the Three Seas do not make up and intimidating economic power. They cover about 28% of the EU's total territory, are home to merely 22% of its total population and produce only about 10% of the total GDP for all 28 member states of the Union. However, as after Brexit they make up over 44% of all the European Union nations, the BABS countries, when in an allied front, are certainly a political force to be reckoned with.

## 6. THE INITIATIVE'S ACHIEVEMENTS SO FAR

The achievements of the countries united in the idea of the Three Seas are not particularly impressive. Since the idea's inception in 2015, only two official meetings of the representatives were held: the first in Dubrovnik in 2016, and the second – in 2017 in Warsaw. The location has also already been chosen for the third summit. It is going to take place in 2018 in Bucharest, the capital of Romania.

Table 3: Summits of the Three Seas Initiative countries  
 ([https://en.wikipedia.org/wiki/Three\\_Seas\\_Initiative](https://en.wikipedia.org/wiki/Three_Seas_Initiative))

No.	Date	Location	Hosting leader	Notes
1 <sup>st</sup>	25-26 August 2016	Dubrovnik (Croatia)	Kolinda Grabar-Kitarovic (President of Croatia)	
2 <sup>nd</sup>	6-7 July 2017	Warsaw (Poland)	Andrzej Duda (President of Poland)	U.S. President Donald Trump attended
3 <sup>rd</sup>	2018	Bucharest (Romania)	Klaus Iohannis (President of Romania)	

### **6.1. Dubrovnik: the first Three Seas Summit**

During the first meeting in Dubrovnik in 2016, a common declaration on the Three Seas Initiative was adopted, which specified the direction and framework of the enterprise. The goal of the member states is to unite their economy and infrastructure in the pursuit of programmes financed by the European Union in the sectors of transport, power engineering and telecommunications. The use of the Connecting Europe Facility fund (Connecting, 2017) is planned, as well as the European Structural and Investment Funds, made up of five separate funds concentrated on areas such as research and innovation, supporting low-carbon economy, digital technology, balanced management of finite resources and small business (European Structural and Investment Funds, 2016). According to the Three Seas Initiative's founding declaration, it is a platform for cooperation between the countries of the EU and for lobbying for the use of EU funds towards the development of key projects within the current and the next EU budget perspectives. What is worth noting is that beside the twelve countries' representatives, the first summit was attended by the Chinese assistant to the Minister of Foreign Affairs, Liu Haixing, who expressed interest in connecting the region to the New Silk Road, as well as the former US general, James L. Jones, currently a private entrepreneur and formerly the president of the Atlantic Council, and influential think-tank, the commander of the United States European Command, as well as a military advisor to presidents George W. Bush and Barack Obama. The conclusion from this is simple – the Three Seas Initiative from its inception aims at trade cooperation with China and close partnership with the United States in the area of energy security. One almost wonders to what degree the Initiative was an original idea by the leaders of Croatia and Poland and how much of it was inspired by Beijing and Washington.

### **6.2. Warsaw: the second Three Seas Summit**

The Warsaw summit was also attended by representatives of the twelve member states, but this time without the company of a Chinese delegate. Instead, the president of the United States of America, Donald Trump, attended the meeting. Compared to the Dubrovnik summit, there was more presidential engagement in Warsaw generally: while the former was attended by six presidents (of Poland, Croatia, Hungary, Lithuania, Slovenia and Bulgaria) and the remaining countries (the Czech Republic, Romania, Slovakia, Austria, Estonia and Latvia) were represented by ministers or vice ministers, nine heads of state were present at the latter (of Poland, Croatia, Hungary, Lithuanian, Bulgaria, Slovenia, Estonia, Latvia, Romania and Slovakia). The delegates from the Czech Republic and Austria were the Chairman of the Chamber of Deputies and the ambassador to Poland respectively. (Szczyt Inicjatywy Trojmorza, 2017). Incidentally, the US president did not come to Poland specifically to attend the Three Seas summit; rather, the date and time for the meeting were suited to his official visit to Poland. Despite this, Donald Trump's presence significantly increased the event's importance. In his address in the Warsaw Royal Castle, the President of the United States stated that America supports the Three Seas Initiative and the development of the entire Central and Eastern European region. Apart from the representatives' declarations of will to continue cooperation and the statement that the Three Seas Initiative is part of the European Union, new ideas were formed. Among these were:

- to seek global economic partners within the group's area of economic activity,
- to initiate collaboration with business entities worldwide,
- to tighten intergovernmental cooperation among the BABS countries,
- to fully synergise with the policies of the European Union,
- to make the economic cooperation within the region long-term.

The most significant achievement of the Warsaw summit was, however, the shift from the discussion of the shape and direction of the cooperation towards establishing actual projects. Over 150 investment projects were agreed upon, totalling 45 billion euro as planned. Agreements and letters of intention were signed for some of them. The main agreements involved Poland and Croatia, and the success of the Initiative depends upon their fulfilment. Presently, the remaining countries of the Three Seas must exercise patience and await the two leading states' results.

### **6.3. Bucharest: the third Three Seas Summit**

For a long period preceding the Warsaw summit, there was doubt as to whether the Romanian president Klaus Iohannis would attend it. Moreover, even the very day before the meeting, the consensus among participants was that the 2018 summit would not take place at all. However, not only did the president arrive, he surprised the delegates by inviting representatives from all 12 member countries to the next year's summit in Bucharest (Szczyt Trojmorza, 2017). In the face of outright scepticism towards the Initiative expressed by some countries, most intensively by the Czech Republic and Austria, the Bucharest meeting will likely be a turning point. Should the Polish and Croatian investments take off and if additionally China and the United States lend official support, it should help convince the remainder of the members to active – and most of all financial – involvement in the project. At the time of writing, all seems to be on the right path. This conclusion is further supported by the decisions made on 5<sup>th</sup> November 2017 during the China and Central and Eastern European Countries Summit in Riga, the capital of Latvia. It was a meeting of the so-called 16+1 Group – which consists of 11 of the Three Seas countries (all but Austria) and the remaining European partners: Albania, Bosnia and Herzegovina, Macedonia, Montenegro and Serbia, plus China. One of the observers of the Riga summit was Belarus. During the meeting, the leaders of participating countries confirmed their support for the initiative from Li Keqiang, the Prime Minister of the People's Republic of China. The initiative aims for investments which would finance connecting the ports in the Adriatic, Baltic and Black seas with European inland waters. The purpose for this cooperative effort is the further development of transport hubs, which will connect ports and coastline industry centres with inland waterways. Ultimately this should create larger industry clusters as well as modern roads, fast railways and traversible new river corridors. A decision was also made concerning the seventeen partners' intent to create the Secretariat for Maritime Affairs, based in Poland, and institution which will help stimulate the shipbuilding industry and launch a direct communications channel between Central and Eastern European countries and China (Adriatyk-Bałtyk-Morze Czarne-Chiny, 2017). These bold projects are to be funded from the Industrial and Commercial Bank of China.

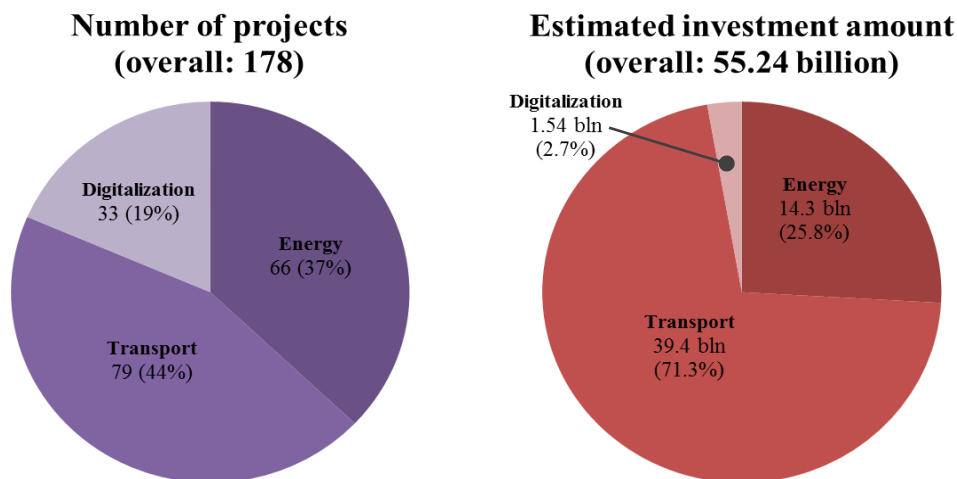
## **7. CARRYING OUT THE INTENDED PROJECTS**

152 projects totalling over 45 billion euro have been planned for the next few years as part of the Three Seas Initiative. The first stage includes investments based on the initiatives from Poland and Croatia in three main areas: power engineering, logistics and transport, as well as IT and telecommunications. Some already consider that in the nearest future these projects should be expanded both conceptually and financially and the numbers they provide estimate nearly 180 projects totalling over 55 billion euro by the end of 2025 (Fig. 6).

*Figure following on the next page*

Figure 18: The Three Seas Initiative projects by area and investment fund until 2025 (adapted from

<https://www.pwc.pl/en/publikacje/2017/the-road-ahead-cee-transport-infrastructure-dynamics.html>; <https://www.youtube.com/watch?v=Pli7240McCs>)



As seen in Figure 6, the greatest emphasis will be put on projects which focus on road and railway infrastructure – although constituting 44% of all the projects, their funds will cover over 71% of all allocated funds. The most important of the structures planned are the Baltic-Adriatic Corridor and the Via Carpathia. The Baltic-Adriatic Corridor is one of the most important trans-European road and railway axes, connecting the Baltic Sea ports in Poland with the Adriatic Sea. The Corridor links major intersections (urban nodes, ports, airports and other transport terminals) through rail, road, maritime and also air transport connections from north to south of Europe, i.e. from Poland through the Czech Republic, Slovakia and Austria to Slovenia and to Italy. (The Road Ahead, 2017). The Via Carpathia, after it is completed, will be a international road connecting the north and south of Europe. It is to run through Lithuania, Poland, Slovakia, Hungary, Romania and Bulgaria all the way to Greece. The project aims to create a fast transport route going along the eastern border of the European Union, leading from Central Europe to Asia and crossing the main routes of communications along the way. Through the ports of the Black Sea, it will join the TRACECA routes, which run from Europe to Central Asia through Caucasus (Matwiejczuk, Gorustowicz, 2011). It is also projected that the Via Carpathica will meet the criteria of a highway or a freeway along the majority of its length, efficiently reducing the time of travel from north to south in the eastern part of Europe. The second largest area of investment planned within the Three Seas Initiative is power engineering – over 14 billion euro across 66 programmes will be used to develop it. In the nearest years, the most important of them will be the connection of the Croatian natural gas terminal on the Island of Krk with the Polish LNG (liquefied natural gas) terminal in Swinoujscie with a pipeline. Thus created, this north to south gas route will provide a number of opportunities to acquire liquid gas from a diversified set of sources, since it opens up the possibility of importing it from North Africa, the Persian Gulf as well as many other Near and Middle Eastern countries with rich gas reserves. The investment will also enable Canadian and American LNG exporters to participate in the market. All terminals should be operational and interconnected by 2019. When they are, the Central European region is going to become an important partner for the world's largest suppliers and simultaneously will be liberated from Russia's monopoly. The creation of this gas route may make a geo-political breakthrough, for it will be a reason to open and integrated natural gas market in Central and Eastern Europe and will increase the region's energy security. As for digitalisation, it is the least significant area in the first stage of the extended cooperation between the countries of the Three Seas Initiative. It includes merely 33 projects totalling just over 1.5 billion euro –

very little considering the importance of the matter of establishing and efficient IT and telecommunications infrastructure for the federation. However, it can be hoped that these new investments combined with the existing structures will be sufficient to extend logistic support to other projects and current activities.

## 8. CONCLUSION

The Three Seas Initiative is another major historical undertaking with the aim of integrating Central and Eastern Europe. Apart from establishing an important economic growth pole in the region, its goal is to attempt to switch traditional trade routes. At the beginning of the 15<sup>th</sup> century, the main trade hub was the Mediterranean Sea. Thanks to major geographical discoveries and to the exploration of lands overseas, this axis of economic, cultural and civilisational exchange has been moved far to the north and from that moment the major trade routes were in this part of the continent (Wozinski, 2017). There was an unprecedented dynamic growth of the Baltic and North seas region. Now, at the beginning of the 21<sup>st</sup> century, we are witnessing the embodiment of a project which intends to rotate this traditional axis of trade 90 degrees and draw it north to south. This is not in the best interest of the greatest beneficiaries of the system so far – countries such as Germany, France or Russia are apprehensive about the possibility of the BABS nations implementing their plans, since they stand in direct conflict with their vital political and economic interests. However, the twelve countries united in the idea of the Three Seas have managed to gain very powerful allies for the Initiative: China and the United States of America – currently the two greatest world powers. The aftermath of the third summit of the Three Seas Initiative, which is to take place in Bucharest in 2018, will verify the effectiveness of these plans and efforts to build new European political and economic structures.

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## CHANGES IN LIFE SATISFACTION - IS THERE A COMMON TENDENCY FOR RUSSIANS AND EUROPEANS?<sup>1</sup>

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### **ABSTRACT**

*For a number of frequency characteristics, generalized principal components have been constructed separately for regions and cities of Russia and European countries through the singular decomposition of a compromised matrix for a number of years (2011-2015). According to the results, the objects that have the main contribution to the generalized principal components are revealed, as well as those features that are most strongly correlated with the first two axes of the compromise space. Such a technique has not previously been used on subjective data.*

**Keywords:** *Compromised matrix, EUROBAROMETER data base, life satisfaction, RLMS data base, singular decomposition*

### **1. INTRODUCTION**

The main aim of the research is to find the way of changing life satisfaction, mostly concerning material part of life. It is built for two data bases: RLMS (years 2011-2015) for Russia and EUROBAROMETER (years 2011-2015) for Europe. Being extremely complicated, conception of life satisfaction, is based on lots of variables. To be able to take all of them into account with getting as much information as possible with minimum information loss, usually methods of dimension minimization are used (e.g., PCA, Factor Analysis, etc.). Leading our main aim was used STATIS methodology (Structuring Three-way data set in Statistics). Method is based on counting the PCA for compromised matrix – such data set which is “common” for all data in analysis. In this case we were able to find correlation coefficients between matrices ( $n \times p$ ), where  $n$  – number of objects in the analysis,  $p$  – number of variables. We tried several procedures of finding compromised matrix, in our case the best one was counted by multiplying data sets with weights, got from transformation of correlation matrix. Also, and the main important, we found objects (regions of Russia or countries of Europe) where the disbalance of human needs and satisfaction of life is found. For both data sets we counted matrices of counts and loadings. For both selections sets of variables were used. These variables are valuations of work, professional growth, material wellbeing and credit instruments (see 1.1 and 1.2). Besides it, within Russian data we valued health, smoking, alcohol taking and status variable (is a person respected by others or not). Within European data we used subjective valuations of educational, health and safety systems and also relations to migration.

#### **1.1. Variables chosen from RLMS data base**

(<https://www.hse.ru/en/rlms/>)

Life satisfaction (from 1 to 5);

Job satisfaction (from 1 to 5);

Work conditions satisfaction (from 1 to 5);

Salary satisfaction (from 1 to 5);

Professional growth possibilities satisfaction (from 1 to 5);

Material wellbeing satisfaction (from 1 to 5);

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<sup>1</sup> The research was carried out with financial support of RSCF (project number: 17-18-01080).

Position on status stairs “Step 1 – the richest, step 9 – the poorest”. Where are you?  
 Position on status stairs “Step 1 – with the great respect from the others, step 9 – with no respect from the others”. Where are you?  
 Personal health estimation (from 1 to 5);  
 Do you usually smoke? (1 – yes, 0 – no);  
 Do you usually drink alcohol, including beer? (1 – yes, 0 – no);  
 Do you have credit debts now? (1 – yes, 0 – no).

## 1.2. Variables chosen from EUROBAROMETER data base

(<https://www.gesis.org/eurobarometer-data-service/home/>)

Life satisfaction (from 1 to 4);  
 Job satisfaction (from 1 to 4);  
 Material wellbeing satisfaction (from 1 to 4);  
 Employment in country estimation (from 1 to 4);  
 Are you worried about inflation? (1 – yes, 0 – no);  
 Are you worried about unemployment? (1 – yes, 0 – no);  
 Are you worried about immigration? (1 – yes, 0 – no);  
 Are you worried about health care system (1 – yes, 0 – no);  
 Are you worried about educational system? (1 – yes, 0 – no);  
 Are you worried about environmental state? (1 – yes, 0 – no).

## 2. METHODOLOGIES

### 2.1. Variables' transformation

Variables were selected as the result of use of instruments of complementarity tables analysis using  $\gamma$  - Goodman-Kruskal criteria between life satisfaction and set of variables (Goodman and Kruskal, 1954, 1959, 1963).

$$\text{All variables are ordered } x_{ir}^{l(k)} = \begin{cases} 1(k_1) \\ 2(k_2) \\ \dots \\ g(k_g) \end{cases} \text{ or dichotomic } x_{ir}^{l(k)} = \begin{cases} 1(k_1) \\ 0(k_2) \end{cases}, \text{ where } i - \text{number}$$

of region,  $r$  – number of respondent,  $l$  – number of question with number of graduations  $k$ . All variables were standardized and then transformed into frequency parameters:

$$x_{ig}^{l(k)} = \frac{1}{n} \sum_{i=1}^n x_{ir}^{l(k)} \cdot 100\% . \text{ After that we analyzed not individuals, but regions – it was reached by}$$

getting mean value of total response for every graduation by number of respondents in it. Besides it we took only part of all graduations of concrete variable. If variable has uneven number of graduations, we took only that which are higher than the mean graduation and summarized its frequencies. In case of two graduations of variable (0 and 1), we used only one – 1.

### 2.2. Results

According to STATIS methodology (Lavit, Escoufier et al., 1994) scalar product matrices  $S_t$  ( $n \times n$ ) were counted,  $S_t = \overset{\circ}{X}_t \overset{\circ}{X}_t^T$ , where  $\overset{\circ}{X}_t (n \times p)$  - initial matrix for year  $t$ ,  $t=1, \dots, k$ .

The next step was counting  $\langle S_t, S_{t'} \rangle_{H-S} = \text{trace}(S_t^T S_{t'})$ , where  $S_t = X_t^0 X_t^{0T}$  - scalar product matrix for year  $t$ , which is taken in comparison with year  $t'$ ,  $t' = 1, \dots, k-1$ .

As the result we got matrix  $C$  ( $k \times k$ ), formed by correlation coefficients:

$$RV_{t,t'} = \frac{\text{trace}(S_t^T S_{t'})}{\sqrt{\text{trace}(S_t^T S_t) \cdot \text{trace}(S_{t'}^T S_{t'})}}$$

(Rivadeneira F.J. et al., 2016).

Correlation matrices for RLMS and EUROBAROMETER data bases – are in tables 1 and 2, respectively.

Table 1: Matrix  $C$  for RLMS data base (authoring)

	2011	2012	2013	2014	2015
2011	1	0,71	0,60	0,60	0,38
2012	0,71	1	0,66	0,67	0,37
2013	0,60	0,66	1	0,63	0,38
2014	0,60	0,67	0,63	1	0,56
2015	0,38	0,37	0,38	0,56	1

Table 2: Matrix  $C_{[EB]}$  for EUROBAROMETER data base (authoring)

	2011	2012	2013	2014	2015
2011	1	0,86	0,82	0,78	0,76
2012	0,86	1	0,93	0,90	0,81
2013	0,82	0,93	1	0,92	0,84
2014	0,78	0,90	0,92	1	0,91
2015	0,76	0,81	0,84	0,91	1

In the second case stronger correlation can be mentioned. In case of Russian data, RLMS, weak correlations between (2011 – 2013) and 2015 can be explained by crisis in economics. In Europe between years 2011 and 2015 several transformations, making influence on correlation coefficients, were mentioned. The most important of them is evaluation of immigration process. One of the main aim of STATIS method is getting the compromised matrix. The procedure for counting a compromise matrix for both samples is based on an analysis of the proportion of the total variance of the attributes on the main axes of the compromise space. For getting compromised matrix for EUROBAROMETER sample eigendecomposition of matrix  $C_{[EB]}$

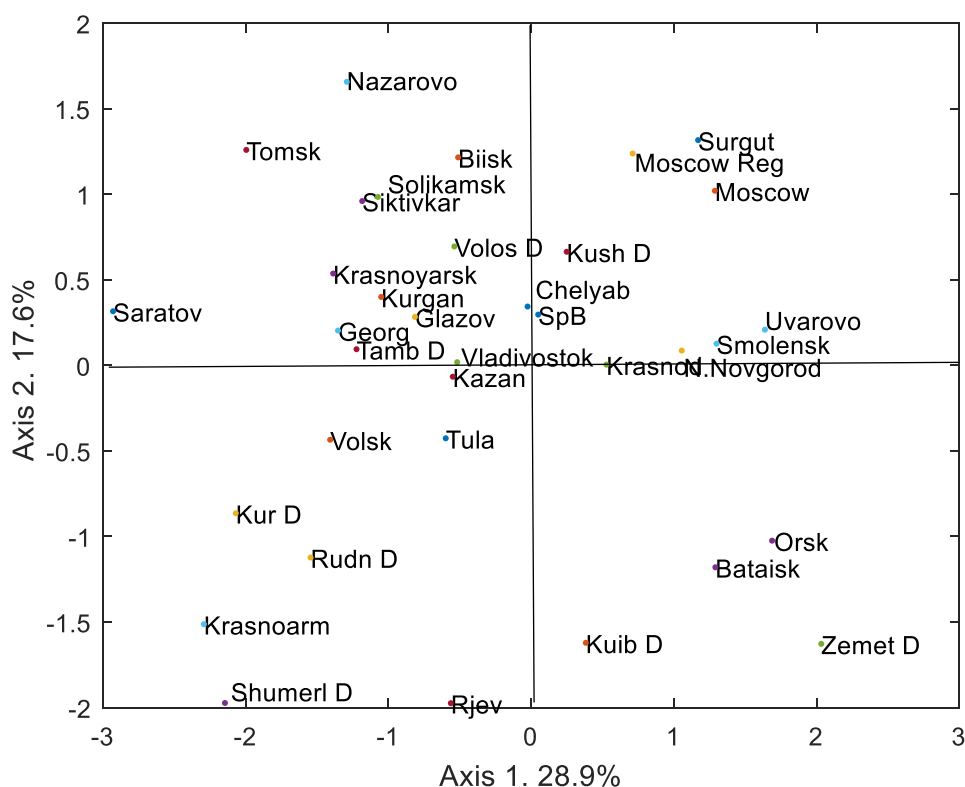
was used:  $C_{[EB]} = U_{[EB]} V_{[EB]} U_{[EB]}^{-1}$ . The first column of matrix ( $U_{[EB]}$ ) – eigenvector, corresponding to the maximum eigenvalue of matrix  $C_{[EB]}$ . Thus,  $a_t = \frac{u_t}{\sum_{t=1}^K u_t}$  - normalized

weights of every  $t$  sets of data. Components of compromised matrix  $S_{com}$  ( $n \times n$ ), first four axes of which explained 67% of total variance, were counted as linear combination:  $S_{com} = \sum_{t=1}^K a_t S_t$ .

For RLMS data set we counted compromised matrix  $S_{com}$  ( $n \times n$ ) as the mean for all five studies

(for years 2011-2015):  $S_{com} = \frac{1}{K} \sum_{t=1}^K S_t$ .

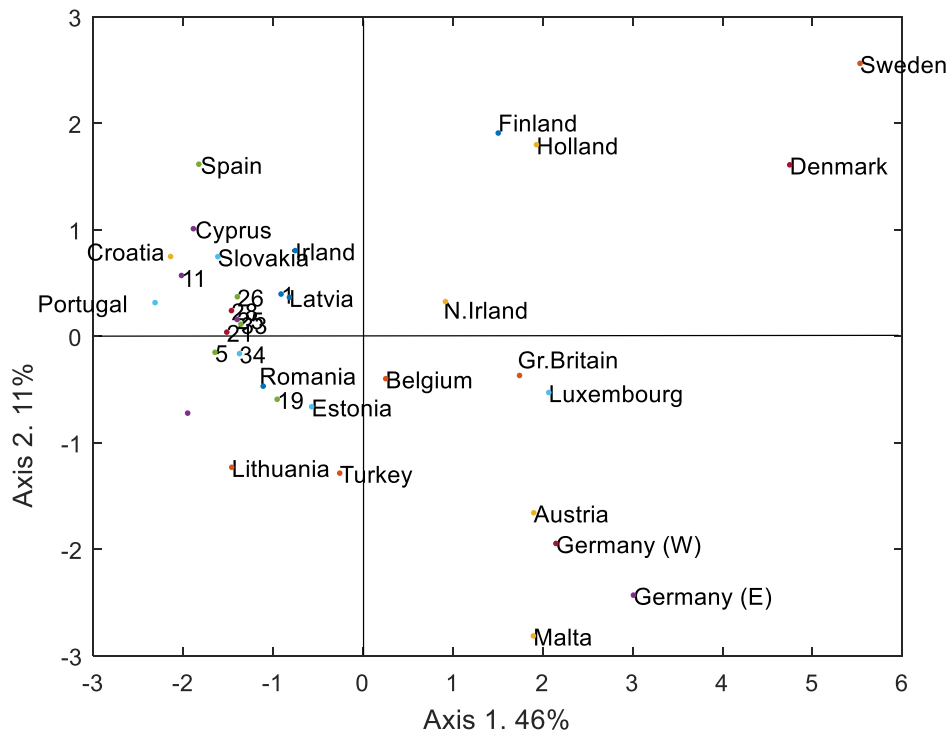
Projections of all objects on the plane of first two principal components are presented on illustrations 1 and 2 from matrix of counts:  $F_{com} = QL^{1/2}$ , respectively. Where  $Q$  - matrix, containing eigenvectors of the compromised matrix,  $L^{1/2}$  - square root of the matrix  $L$ , on the diagonal of which are the eigenvalues of the compromised matrix. Matrices  $L$  and  $Q$  are the result of spectral decomposition of the compromised matrix:  $S_{com} = QLQ^T$ .



Figure/Chart 1: Projection of objects (RLMS data set) on the axis (1; 2) of the compromised space (authoring)

The expected breakdown of the entire set of objects into groups has occurred. Objects in the upper right quadrant are characterized by high estimates of material satisfaction, opportunities for professional growth, working conditions. In addition, there is a low level of credit debt, high health assessments and status assessments (respect from others). Most lagging are cities Tomsk and Saratov. Here are low estimates of work and welfare, high debt on loans. Orsk and Bataisk are characterized by low status assessment (respect), low estimates of working conditions against the average (according to the sample) salary estimates. The principal component of the Russian compromised space (28.9% of total variation) combines assessments of material wellbeing, work and health. The second principal component, explaining 17.6% of the total variation – combines 4 variables, smoking, frequency of alcohol consumption, credit obligations and position on the status (respect from the others) ladder. When analyzing Eurobarometer data, the whole set of countries was divided into two groups. On the one hand, "rich" countries with a developed economy, whose population highly estimates material wellbeing, work, level of development of the education and health system, and concerning with

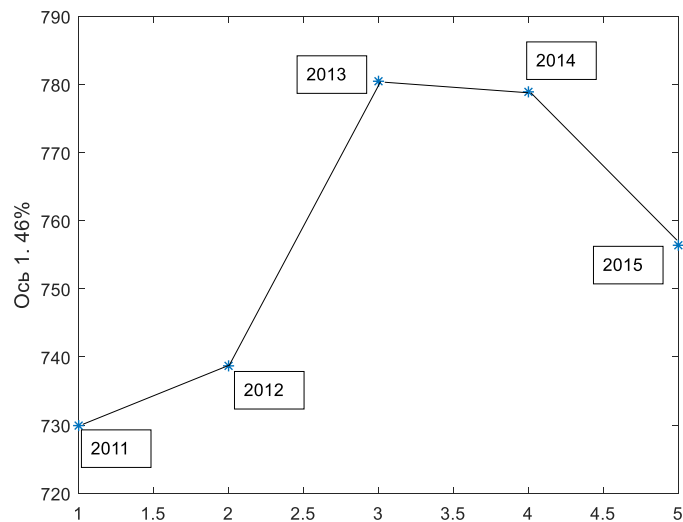
migration processes. In the other group – countries of the south and the center of Europe. Especially distinguished are Spain, Cyprus, Croatia, Portugal, Croatia, Greece (11). In these



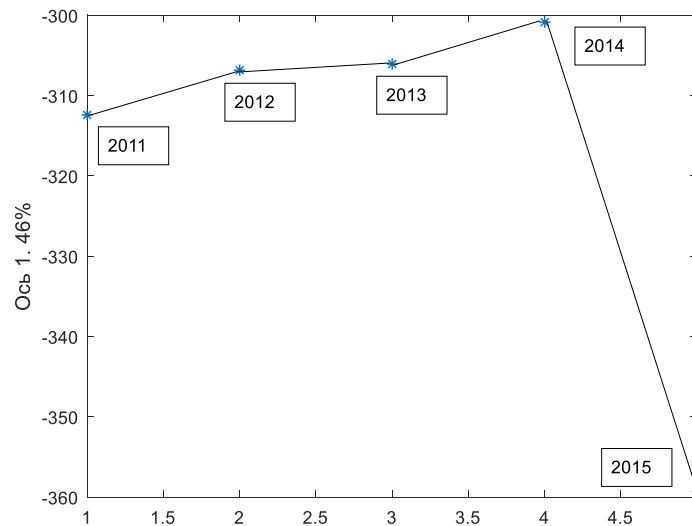
countries - a huge level of unemployment, not high (subjective) material wellbeing of households and other problems.

Figure/Chart 2: Projection of objects (EUROBAROMETER data set) on the axis (1; 2) of the compromised space (authoring)

Matrix of loadings for compromised matrix (case of EUROBAROMETER) gives us also two factors. The first one conducts all the material estimators. The second one consists of estimates of environment, education and health care system. To illustrate the movement of European countries within a compromised space, we built charts of trajectories for the two countries, Sweden and Portugal, respectively (Figures 3 and 4).



Figure/Chart 3: Trajectory of the position of Sweden relatively to the first axis of the compromised space (authoring)



Figure/Chart 4: Trajectory of the position of Portugal relatively to the first axis of the compromised space (authoring)

Sweden belongs to the first group (high level of life satisfaction). Trajectory of Sweden goes in some interval, we can see descent from 2014 to 2015 years. In case of Portugal it is not a descent, but a rapid fall. But for years 2011-2014 the situation was most stable, than in Sweden. Consecutive exclusion of the matrices  $\hat{X}_i^o(n \times p)$  and, as the result, matrices  $S_i = \hat{X}_i^o \hat{X}_i^{oT}$ , from the analysis did not violate the stability of the model – it is stable in both cases (Russian and European countries).

### 3. CONCLUSION

For both cases (RLMS and EUROBAROMETER data bases) we found material basement for life satisfaction. Correlation between initial matrices for Russian case is weaker then for European. But for both of them clusters of regions (countries) was got. As the result groups of “reach” and “poor” regions (countries) are divided. The evidence of stable of the method was got.

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## CRITERIA FOR THE QUALITY ASSESSMENT OF REGIONAL TOURIST PRODUCTS ACCORDING TO TOURISTS AND TOURISM ENTREPRENEURS

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### **ABSTRACT**

*Regional products are very diverse, are created by multiple entities and consumed by various less or more demanding customers. They contain both tangible and intangible elements which are specific to services. The aim of this study is to show the complexity of quality assessment of regional tourist products and present the most important criteria for this assessment. Some selected criteria for quality assessment have been analysed based on a questionnaire. These criteria were arranged by importance according to entrepreneurs and tourists. Therefore two groups of respondents took part in the survey: tourism service providers (owners of hotels, restaurants, travel agencies, carriers) and tourists. The objective was to compare the criteria specified by service providers with the criteria specified by tourists. The survey was conducted in the Pomerania Province in 2014 and 2017. A sample of 674 respondents in total took part in it. Results have shown that the most important criteria indicated by entrepreneurs differ from those indicated by tourists.*

**Keywords:** *quality, region tourist, product*

### **1. INTRODUCTION**

Assessment of product quality depends on certain policies (Chan, Ibrahim, 2004). There are many systems and tools that enable to look at a product from multiple perspectives. When assessing a regional product, one encounters many limitations and difficulties in taking an objective look at its quality. Regional products are very diverse, are created by multiple entities and consumed by various less or more demanding customers (Wanagos, Smalec, Małachowski, 2017). They contain both tangible and intangible elements which are specific to services. Quality assessment should consist of multiple stages and layers. Tourism is one of the fields where space – regional features, infrastructure as well as the scope and level of services – is particularly important for the process of shaping the overall quality of the region. According to the concept of the tourism value chain (Weiermair, 1997, p. 40), the satisfaction of visitors in the region contains a number of elements. These elements can be arranged as links of the chain, from the idea about the region, travelling, accommodation, attractions to contacts after the visit and memories. A fully developed tourist region operates by using a specific spatial system of individual devices, infrastructure, institutions, environmental conditions and social relationships (Warszyńska, Jackowski, 1978, p. 72; ). Its functionality and effectiveness depend mainly on the organisation and cooperation of individual entities (Sołtysik, 2013, p. 83; Smalec, 2011, p. 489; Studzieniecki, 2016, p. 970; Studzieniecki, Soares, 2017, p. 135). The cooperation also includes responsibility for the environment in which it operates (Wolska, Kizielewicz, 2015, p.146 ). It is important to note that – as we know – tourism demand is met by the consumption of multiple services simultaneously. These services are complementary, inseparable from one another.



The main concept of this study is that the region (destination) in which tourists arrive is a whole, a product by itself (Florek, 2006, p.54), and all elements that tourists encounter during their stay should be included in the assessment of its quality. From the point of view of entrepreneurs offering their product, the focus should be put on the services they provide (Parasuraman, Zeithaml, Berry, 1985, p. 41-50). In contrast, tourists usually assess services from the perspective of the trip as a whole and their assessment is affected by many factors (Kailash, 1996, p. 238). Thus according to entrepreneurs, the quality of the entire area, its infrastructure, services provided by other entrepreneurs, etc., should be as important as the services provided by their own companies (Małachowski, 2015, p. 228).

## **2. QUALITY OF REGIONAL TOURIST PRODUCTS**

When analysing the quality of a tourist region, it is extremely important to be aware of the multitude and complexity of its elements. In addition, such a product is not coordinated by a single entity (Kizielewicz, 2001, p. 83). Its individual elements are subject to different centres of power and, therefore, to different concepts of management (also in terms of quality) (Wanagos, 2009, p. 588). Tourism is part of the sphere of services so it also needs a specific look at quality assessment. More and more often companies are coming to the conclusion that surveys aimed to assess their services are insufficient because their results often do not reflect the real level of quality, only the temporary impressions of recipients of their services. The view that it is very difficult to measure service quality and sometimes even impossible is still common (Dziadkowiec, 2004, p. 108). But there are many methods which have been both studied theoretically and applied in practise. In particular, when assessing the tourism quality of the region, the emotional connection to a product expressed by the consumer is an important issue. Tourist offers are built mainly to provide some experiences for tourists. Thus it is particularly important to note the subjective nature of assessment of product quality by tourists. A factor which is completely irrelevant to this service, e.g. something that tourists experienced during the day before they used that service, may affect the assessment of specific services. For example, tourists who are satisfied with cultural values because such values were their goal usually assess the services provided by the restaurant where they have dinner much higher. This results to a great extent from the subjectivity of tourist assessment (e.g. there are many factors which affect the tourist's mood and create specific feelings) which is an inseparable regularity of service quality. This becomes obvious and indisputable if we accept the fact that tourism is built on emotions (Smalec, 2014). An important issue and at the same time a difficulty is also the fact that tourist services are often perceived by tourists as a comprehensive offer of the destination they are visiting. The main concept of this study is that the region – the destination in which tourists arrive is a whole, a product by itself, and all elements that tourists encounter during their stay should be included in the assessment of its quality. In literature, the regional product is called a megaproduct (Markowski, 1997, p. 108.). Assessment of its quality should include not only individual services but also individual natural and anthropogenic assets, regional infrastructure, the hospitality of residents, etc. Such a product does not have one decision-making centre (although there may be many local provisions, norms or customs); its shape and quality are affected by many entities that operate in the region. These entities have different goals and different legal forms (John, 2001, p. 43). There are also elements of the product that people must accept as permanent and beyond their control (e.g. climate or landform features). These elements are very often the basis of a regional product, they are the main motive of tourist arrivals and the main criteria for the quality assessment of the region. The region as a product is not, however, a simple sum of all goods and services in a given area (Kaczmarek, Stasiak, Włodarczyk, 2005, p. 100). All elements together create the uniqueness of the product and capture the quality of the region. Individual regional tourist products (they are also a set of multiple services and goods, but they are a coherent homogeneous whole in terms of the

concept) – there may be more than one product in a region – should be analysed as a separate issue.

### **2.1. A list of criteria for the quality assessment of regional tourist products**

There are many methods of assessing quality and each of them has various criteria. When assessing a regional tourist product, one should make a synthesis of these criteria which could give an overview of the things that are important for such a specific product. This article is based on the criteria suggested in three methods for surveying and assessing quality. Tourism as a sphere of services is based on tangible and non-tangible aspects so it uses methods for evaluating service quality (Kolman, Tkaczyk, 1996, p. 88). The first method is USQS (Universal Service Quality Standard). It is a ready research tool for assessing different kinds of services. Its additional asset is looking at the quality from the point of view of the service provider and the customer (Dziadkowiec, 2004). The second method is SERVQUAL. It is the most popular method, it has many practical applications. It determines the gaps between the customer's expectations and the producer's knowledge, experience and will (Karaszewski, 2001). The third method is CIT. It identifies critical events to analyse factors that have a considerable impact on the quality of the service experienced by customers as satisfaction or dissatisfaction (Krzyżanowska, Wajner, 2000). These methods enable to take into account the realities of the industry and the specificity of tourist companies. On the other hand, they are completely developed research tools that contain not only a set of assessment criteria but also research methodology. The aim of this study was to compare (as far as possible) universal criteria for quality assessment which could be the basis of further research process. The selection of criteria for quality assessment is the starting point in qualitative research methods. In any case, it involves the selection of criteria for a specific entity, issue and aim. This study, based on the criteria of the selected methods that function in practise, seeks to present and assess criteria for the quality assessment of regional tourist products in a comprehensive manner, for the entire destination visited by tourists. We could assume that the quality of the regional tourist product is the sum of qualities of individual services and properties and other regional elements which create this product. However, in this study we assumed that the quality of the regional tourist product must be analysed comprehensively as a whole. It results from the fact that tourists perceive and assess it in the context of their entire tourist trip and the assessment of a single service (which is a subproduct of the regional product) is very strictly related to the assessment of the entire regional product perceived in a comprehensive manner. We identified several aspects which were given the following assessment criteria: spatial, technical, economic, social, and organisational.

The spatial aspect contains:

- general level of natural assets;
- general level of cultural assets;
- localisation of accommodation and catering services (availability, number of places);
- localisation of tourist, natural and cultural attractions (availability);
- aesthetic impressions concerning the region (cleanness, spatial layout, etc.).

The technical aspect contains:

- technical condition of roads and elements of road infrastructure;
- technical level of transport facilities (airports, seaports, marines, railway and bus stations, city bus stops, etc.);
- technical level of accommodation services;
- technical level of catering services;

- technical level of specialist services (e.g. sports, health services, etc. – depending on the goal of the trip);
- technical level of adjustment of tourist attractions (cultural and natural);
- technical level of IT services;
- access to the Internet.

The economic aspect contains:

- payment methods (different forms such as card, voucher, cash);
- accessibility of banks and cash machines;
- diverse offer in terms of price.

The social and communication aspect contains:

- general impressions concerning residents;
- kindness and openness of residents;
- general impression concerning employees related to the service;
- employee knowledge and skills concerning the product in tourist service;
- customer service skills;
- efficient and fast information;
- employee communication skills (whether the employees speak foreign languages, know cultural differences, etc.).

The organisational aspect contains:

- coherent transport systems (e.g. synchronisation of connections);
- offer availability (e.g. cooperation hotel - museum, etc.);
- other connections between entities improving service consumption;
- time spent waiting for services (e.g. attractions, food, etc.).

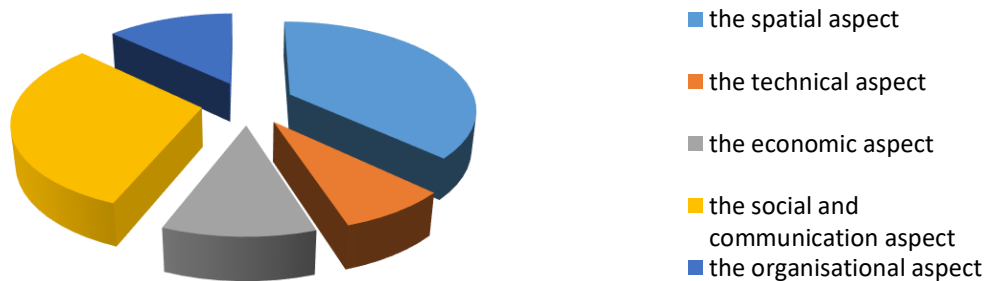
This list does not exhaust the issue of quality assessment of regional tourist products. This list should be modified depending on the specificity of the product and the aim of the survey. Each time the quality assessment of a specific regional tourist product needs to be specified in detail, taking into account the product type and the specificity of the region. These criteria are only a stage to prepare the research tool and each time they need a method to be developed. The presented concept was used to achieve the objective of this study. It generally arranges the criteria by adopted weights, using a questionnaire, and therefore specifies which of these criteria are more or less important according to customers and entrepreneurs.

### **3. METHOD AND RESULTS OF THE EMPIRICAL RESEARCH**

The aim of the research was to arrange the criteria for the quality assessment of tourist regional products and compare the manner in which a given problem is perceived by entrepreneurs providing tourist services and tourists. The main issue was whether the opinion of entrepreneurs who have a different point of view is the same as the opinion of their customers. Out of many criteria for the assessment of regional products, we selected about twenty and grouped them into five aspects. The method was a diagnostic survey which was carried out using questionnaires. The questionnaire contained a list of criteria for the quality assessment of regional tourist products. It was addressed to two groups of respondents: entrepreneurs and tourists. During the first stage, the respondents' task was to specify how important each aspect of quality assessment is (spatial, technical, economic, social, communicative and organisational), where the sum of the weights was equal to 100. Next, on a scale of 0 to 100, respondents gave the weight to each suggested criterion for quality assessment. Entrepreneurs and tourists from the Pomerania Province were surveyed. The survey covered companies

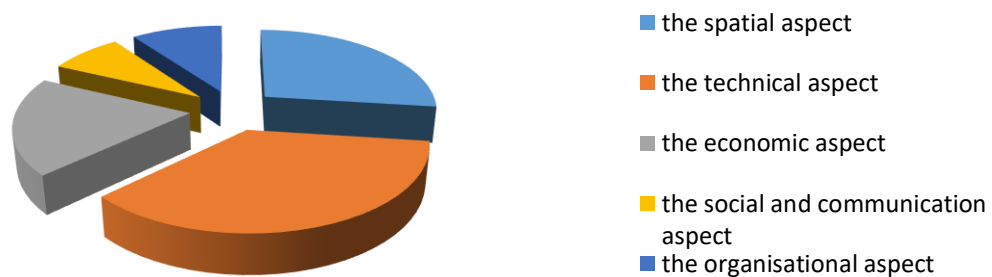
operating in the tourism industry: hotel management, food services, travel agencies and passenger transport. The sample was drawn from a sampling frame: the number of the registered business entities. The estimation error was 3%, while the sample size was  $n=121$ . The opinion poll was conducted at the end of October and the beginning of November 2014. The questionnaires were sent to respondents by email after a phone call. The refusal rate was between 1% and 3%. The following companies participated in the survey: 54% of companies from the hotel industry, 21% of companies providing food services, 13% of travel agencies and 12% of transport companies. Tourists were surveyed during two periods: in 2014 and 2017. Five hundred and fifty-three people participated in the survey based on a random sample (every 10th customer in the companies which were the first surveyed group). The demographics included in the questionnaire enabled to describe the surveyed group by age, sex and place of residence. The survey has shown that for tourists the most important criteria are those in the social and communication sphere as well as in the spatial sphere (68% in total), while the least important criteria are in the technical sphere (13%) (cf. fig. 1). Entrepreneurs find the technical aspect to be the most important – 36% of respondents, while they consider the social and organisational aspect to be the least important (only 18%), as shown in fig. 2.

*Fig. 1 Importance given to each aspect of quality assessment by tourists*



*Source: own research*

*Fig. 2 Importance given to each aspect of quality assessment by entrepreneurs*

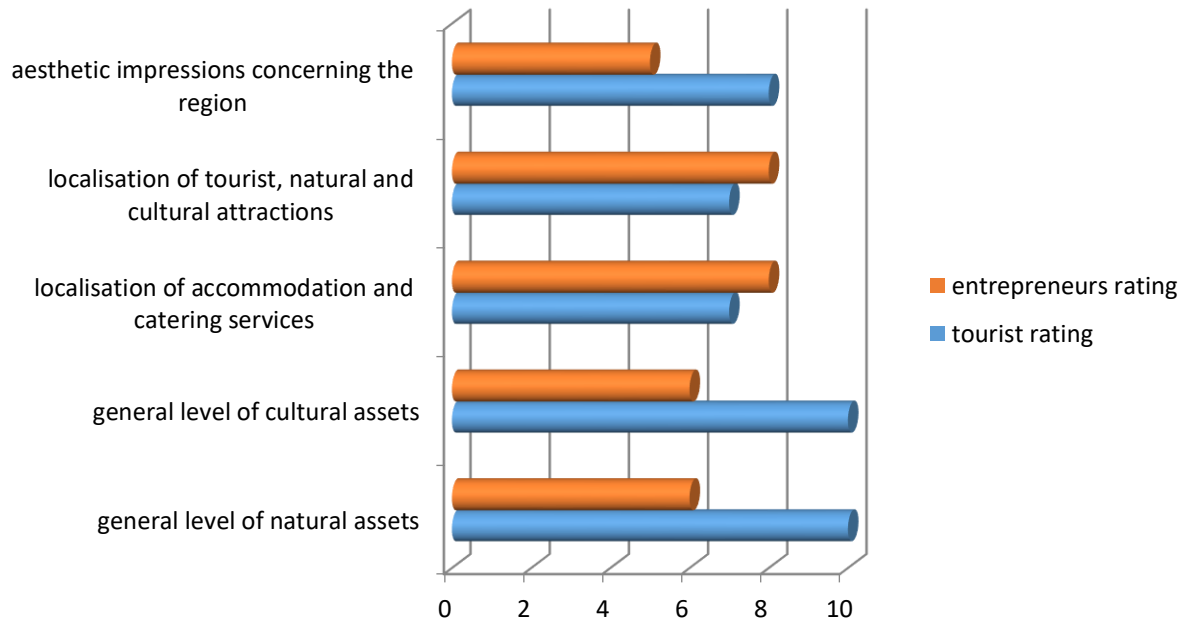


*Source: own research*

According to the surveyed tourists, the spatial sphere and its criteria are the most important factors because spatial elements are the basis for the decision to arrive in a destination. Tourists indicated that the "general level of natural values" and "...cultural values" are the most important for the quality assessment in this sphere; they gave 10 points to these criteria. Second, they indicated "aesthetic impressions...", giving them 8 points.

In contrast, entrepreneurs gave most points to "localisation of services" and "localisation of attractions" (8 points to each), followed by "the general level of natural assets" and "the general level of cultural assets" (6 points to each). "Aesthetic impressions" were given 5 points, as shown in fig. 3.

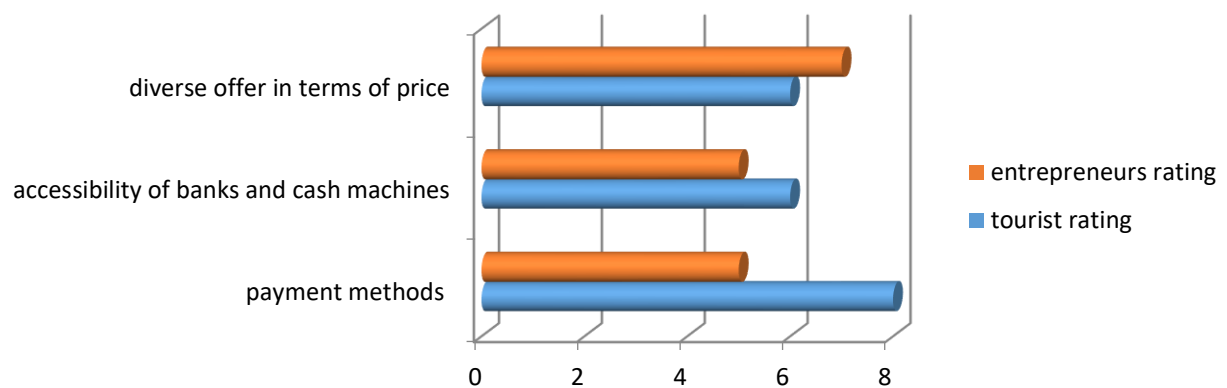
Fig. 3: Criteria for the quality assessment of the spatial sphere according to entrepreneurs and tourists



Source: own research.

As regards the criteria for the economic sphere, tourists gave the biggest number of points to amenities in the form of payment methods (8 points). Entrepreneurs gave most points (7 points) to "diverse offer in terms of price" (fig. 4).

Fig. 4: Criteria for the quality assessment of the economic sphere according to entrepreneurs and tourists

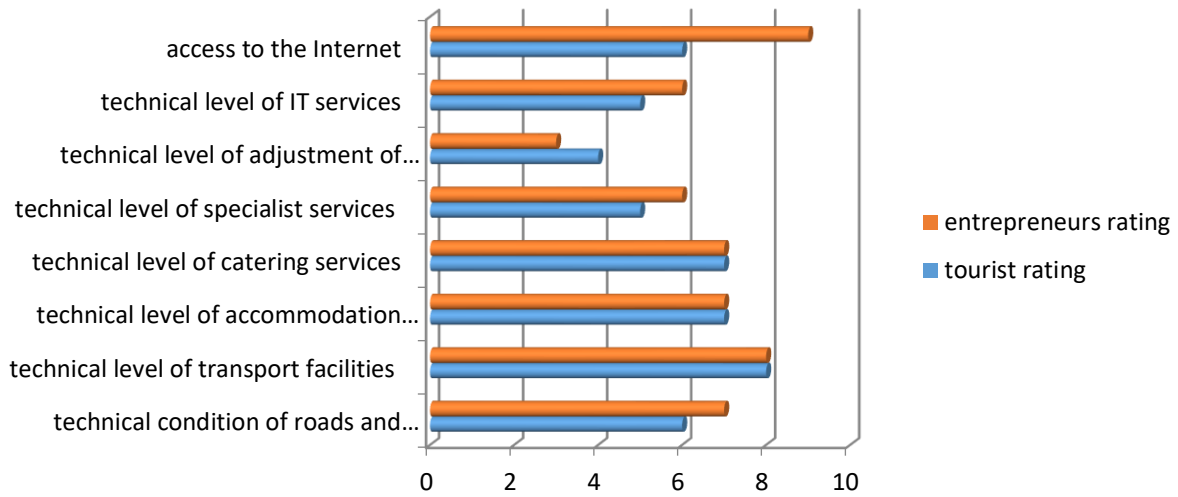


Source: own research.

Both surveyed groups expressed a very similar opinion on the criteria for quality assessment in the technical sphere. Both tourists and entrepreneurs gave most points to the technical level of transport facilities (8 points) and the technical level of accommodation and catering services (7

points). "Access to the Internet" received less points from tourists (6 points). Entrepreneurs gave it 9 points (fig. 5).

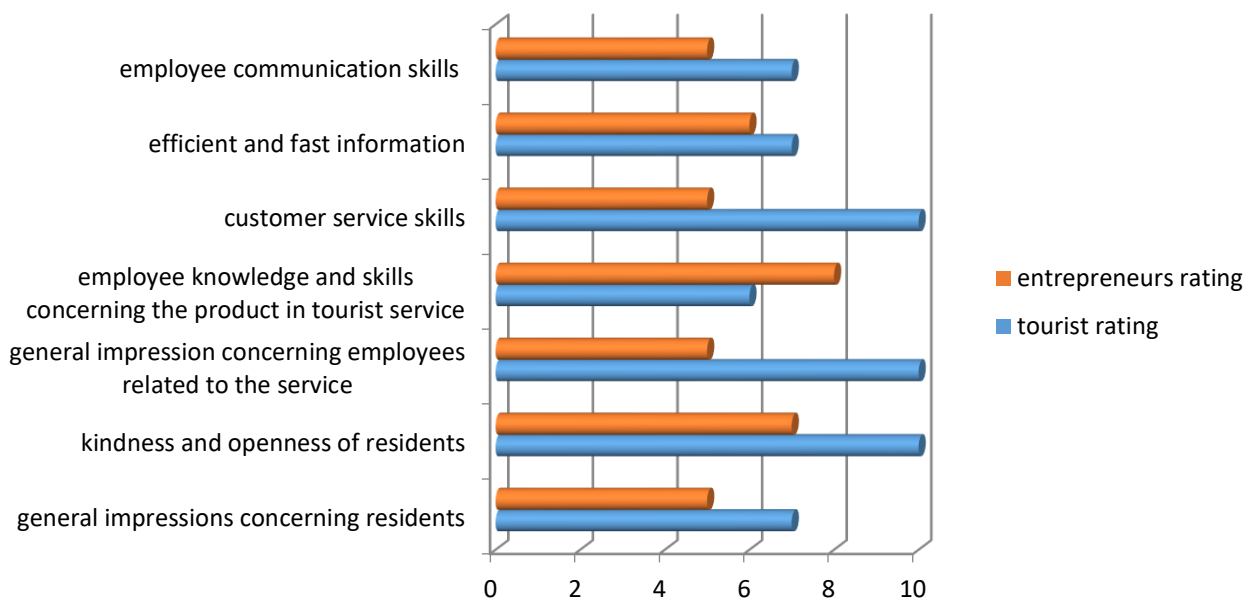
Fig. 5: Criteria for the quality assessment of the technical sphere according to entrepreneurs and tourists



Source: own research.

The criteria for the social and communication sphere were assessed very high by tourists. They gave most points to the following criteria (10): "kindliness and openness of residents", "general impression concerning employees related to the service", "customer service skills". Entrepreneurs gave most points to: "employee knowledge and skills concerning the product in tourist service" (8 points), "kindliness and openness of residents" (7 points), "efficient and fast information" (6 points). The results are shown in fig. 6.

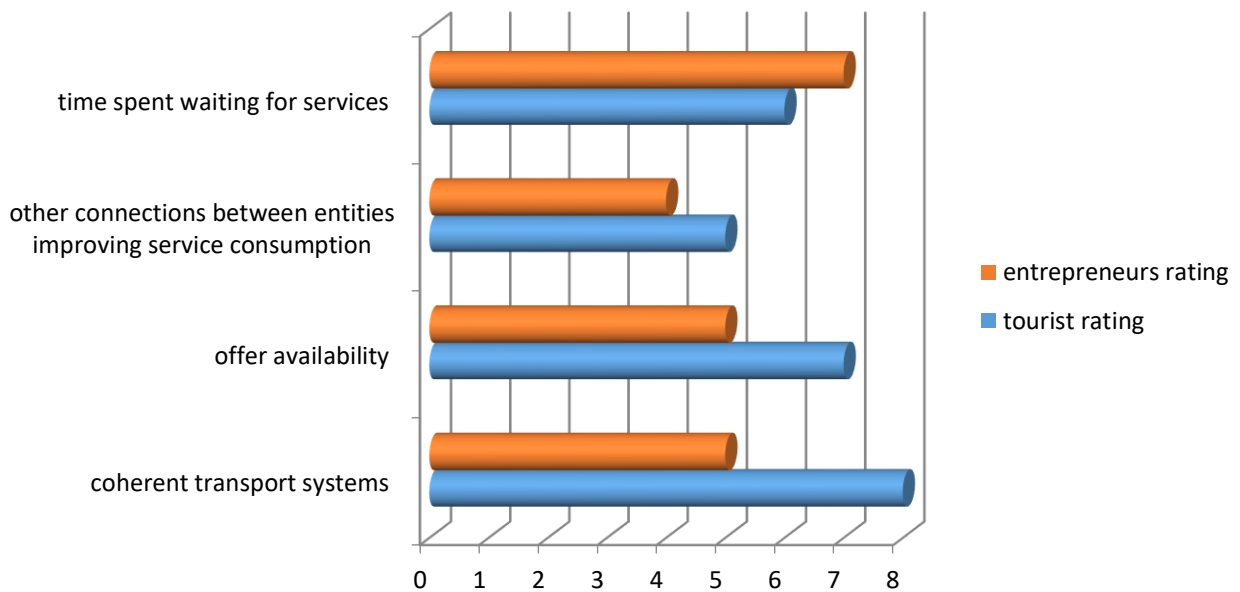
Fig. 6: Criteria for the quality assessment of the social and communication sphere according to entrepreneurs and tourists



Source: own research.

The criteria from the organisational sphere are the last group. This is an extremely important group because it determines the convenience and effectiveness of tourist service. Tourists indicated the following criteria as the most important: "coherent regional transport systems" (8 points) and "offer availability" (7 points). Entrepreneurs gave most points (7) to "time spent waiting for a service" The results are shown in fig. 7.

Fig. 7: Criteria for the quality assessment of the organisational sphere according to entrepreneurs and tourists



Source: own research.

As the survey has shown, the opinions on individual criteria are divided. The opinions of tourists rarely coincide with the opinions of entrepreneurs. This proves that it is extremely important to survey tourists so that the quality of products can be shaped both in terms of a specific company and the entire region.

#### 4. CONCLUSION

This study seeks to compare quality criteria for regional tourist products and to indicate their significance from the point of view of entrepreneurs providing tourist services and tourists. We must remember that the selection of specific criteria for quality assessment depends on the specificity of the region, the type of products and the aim of the survey. Although the criteria that we have presented are universal to a great extent, this list is not a ready tool which can be used uncritically. Tourism is hugely diverse; its uniqueness is usually its strongest asset, not the unification. It is obvious that the system of quality assessment should be selected individually each time. Only this approach ensures that the values that are important both for customers and companies will be measured precisely. The survey has shown a huge difference in the assessment of criteria by entrepreneurs and tourists. Even during the early stages of the survey, when the (grouped) aspects of criteria were assessed generally, it turned out that the most important quality criteria for tourists (spatial as well as social and communicative) are not the most important for entrepreneurs. Entrepreneurs are more likely to focus on the technical aspects which are the least important for tourists. The fact that tourists very often indicated completely different criteria and gave them more points than entrepreneurs is also very important. The criteria that were less important for tourists were often assessed much higher by entrepreneurs.

When assessing quality, it is extremely important to take into account both (entrepreneurs' and tourists') opinions and, depending on the objective of the survey and the specificity of the product, to consider the individual character of the survey.

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## GROWTH DISASTERS IN LEAST DEVELOPED COUNTRIES

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### **ABSTRACT**

*The paper presents trends in economic growth and development in fifteen least developed countries (11 LDCs in Africa, 2 Pacific islands, Yemen, and Haiti) with negative or very low average growth rates over the period from 2001 to 2015. The study is based on the data retrieved from the World Bank Database. During the considered 15 years, eleven LDCs recorded negative average annual GDP per capita growth rates and four countries had growth rates smaller than 0.5%. In the analysed LDCs, GDP has been mainly generated through services and agriculture sectors. The poorest countries were highly dependent on agriculture which provided a living for the vast majority of their population. On the demand side, domestic private consumption was the main source of growth in the examined LDCs. In the years 2001-2015, a half of the analysed countries experienced a decline in the share of exports of goods and services in GDP. Ten LDCs were classified as aid-dependent. Besides, remittances were a significant source of finance in five of them. The countries, except one, did not attract foreign direct investment. LDCs with very low or negative growth rates have serious problems with corruption and poor governance. Moreover, they are affected by conflicts, internal political turmoil and suffered from shocks (natural environmental disasters). Several LDCs, despite the poor economic performance, managed to improve significantly their development indicators.*

**Keywords:** *economic development, economic growth, LDCs*

### **1. INTRODUCTION**

Over the period from 2001 to 2015, fifteen least developed countries (LDCs) recorded negative or very low average annual GDP per capita growth. The countries are diversified in terms of the size of economy and the level of economic development. Kiribati, Togo, Vanuatu, and Yemen are lower middle income economies and the remaining countries (Burundi, Central African Republic, Comoros, Eritrea, Gambia, Guinea, Guinea-Bissau, Haiti, Liberia, Madagascar, and South Sudan) are low income. According to GDP, the biggest economies are Yemen and Madagascar. In 2016, Yemen's GDP was more than 160 times bigger than that of Kiribati. The analysed countries differ not only in the size of economy but also in terms of economic systems. For instance, Haiti and Madagascar are free market economies while Eritrea has a strict command economy. Moreover, the countries differ in natural resources endowment. Burundi, Comoros, Gambia, Kiribati, Madagascar, and Vanuatu have few natural resources. On the other hand, several countries have an extensive amount of resources. Eritrea has copper, gold, granite, marble, and potash. Guinea possesses iron ore, gold, diamonds and the world's largest reserves of bauxite. Guinea-Bissau has significant deposits of bauxite, phosphates, heavy sands and also fertile soils. South Sudan has vast reserves of petroleum. Yemen is richly endowed in oil, copper, nickel, gold, and coal. The natural resources of Liberia include iron ore, diamonds, gold, and rubber. Togo is famous of its phosphate deposits. Haiti has bauxite, gold, copper, marble, and silver. By area, the biggest countries are Central African Republic, South Sudan, Madagascar, and Yemen. In turn, Kiribati, Comoros, Gambia and Vanuatu are the smallest. The most populated countries are Yemen and Madagascar. In 2015, Yemen's population was above 26 million by 2017 estimates. The population of Madagascar was estimated at 25 million. In contrast, Kiribati had the population of 112 thousand and Vanuatu of 265 thousand (UNPD, 2017). The aim of the paper is to show trends in economic growth and development in fifteen least developed countries (11 LDCs in Africa, 2 Pacific islands,

Yemen, and Haiti) with negative or very low average growth rates in the years 2001-2015. The study is based on the data retrieved from the World Bank Database. There are a lot of studies on economic growth and development in selected least developed countries. For instance, Nowak (2017) analyses economic development in nine Asian LDCs. Oluwatayo and Ojo (2018) focus on determinants of economic growth in African countries. Colton (2010) presents problems of the Yemeni economy and Pop (2016) examines market conditions in Haiti. The main contribution of this paper to the discussion on low economic growth and development in LDCs is a comparison of their growth and development trends using the same set of data.

## 2. SOURCES OF ECONOMIC GROWTH

In the years 2001-2015, the average GDP growth rate was -0.5% in Central African Republic (CAR) and 0.1% in Yemen. GDP growth rates of nine least developed countries ranged from 1.2% to 2.7%. Economic growth slightly above 3% per year was observed only in Gambia, Burundi, and Togo. The economic performance of several countries was even worse in a shorter period. The annual GDP growth rate in Yemen averaged -1.8% from 2006 to 2015. At the same time the economy of Central African Republic grew at rate -1.7%. The South Sudanese economy was growing at -10.9% in the years 2011-2015. Only the Liberian economy grew fast (at 6.1% per year) over 2006-2015. Low GDP growth together with high population growth resulted in really low GDP per capita growth in several LDCs. During 15 years, the highest annual GDP per capita growth rate in the group of analysed least developed countries was less than 0.5%. Over the period from 2006 to 2015, GDP per capita growth ranged from -4.44% in Yemen to +2.78% in Liberia (Table 1).

*Table 1: Average GDP per capita growth in the selected LDCs, 2001-2015 (Source: own calculations based on WBOD, 2017)*

Country	Average GDP p.c. growth, 2001-2015	Average GDP p.c. growth, 2006-2015	Country	Average GDP p.c. growth, 2001-2015	Average GDP p.c. growth, 2006-2015
South Sudan	-14.4% (2011-2015)		Madagascar	-0.33%	-0.12%
Yemen	-2.56%	-4.44%	Burundi	-0.29%	0.08%
CAR	-2.31%	-3.51%	Vanuatu	-0.04%	0.73%
Eritrea	-1.20% (2001-2011)	-1.47% (2006-2011)	Guinea	0.02%	-0.54%
Kiribati	-0.46%	-0.53%	Gambia	0.06%	0.19%
Liberia	-0.43%	2.78%	Togo	0.35%	1.32%
Haiti	-0.35%	0.55%	Guinea-Bissau	0.41%	0.82%
Comoros	-0.34%	-0.43%			

Between 2001 and 2015, the value of GDP per capita (in constant 2010 US dollars) declined by nearly 33% in Yemen and by more than 25% in Central African Republic. GDP of Madagascar decreased by 7.3% and GDP of Liberia by 5.7%. Comoros, Kiribati and Haiti recorded decline in GDP per capita by 4.4%, 3.6%, and 2.5%, respectively. On the supply side, the services sector contributed more than 50% to GDP in Kiribati, Vanuatu, Gambia, Eritrea, and Madagascar (UNCTAD, 2016). Services followed by the industry sector have been generated GDP in Haiti and Guinea and services followed by agriculture in Liberia. The industry sector has been the main driver of growth in South Sudan. GDP in Yemen has been generated through the industry and services sectors while in Burundi, Central African Republic, Comoros, Guinea-Bissau, and Togo by the agriculture and services sectors. Except South Sudan, Yemen, Guinea and Eritrea, the industry sector has been contributed less than 20% to GDP of the remaining countries. Generally, the economies have been dominated by the informal sector, with numerous micro and small businesses that geared towards the local markets AEO (2017). Earnings from fishing licences generate income in Kiribati. Offshore

financial services<sup>1</sup> and tourism form the basis of Vanuatu's income. Gambia benefits from tourism and re-export trade. In Madagascar economic growth is driven by tourism, construction, agriculture, and the extractive industries. Agriculture, including fishing, hunting, and forestry, tourism, construction, and commercial activities constitute GDP of Comoros. The income of Haiti has been generated primarily through banking, electricity, telecom services, textiles, sugar refining, and construction industry. The mining sector heavily affects Guinea's economic performance. Economic growth has been driven by the expansion of mineral production in Eritrea and crude oil production in South Sudan and Yemen. The Liberian economy relies on production of the iron ore and agricultural sector led by rubber and timber exports. Agriculture (the cultivation of food crops), forestry and mining remain the basis of the Central African economy. Burundi's agriculture is dominated by coffee, cotton and tea. The Bissau-Guinean economy is based on cashews and fishing and the Togolese economy heavily depends on cocoa, coffee, and cotton. In terms of employment, agriculture has been a major sector in most LDCs. In Burundi, above 90% of the population are engaged in agricultural activities. Agriculture provided the main livelihood for more than 60% of the population in Central African Republic, Comoros, Eritrea, Guinea, Madagascar and Vanuatu in 2015. Only in Gambia and Yemen, a half of labour force was employed in the services sector. The biggest decline in the employment in agriculture sector between 2000 and 2015 has been observed in Gambia and Guinea-Bissau (Table 2). In the years 2001-2015, the labour productivity declined in almost all countries<sup>2</sup>. The positive average growth rates of labour productivity were recorded only in Togo and Vanuatu. However, the rates were very low (less than 0.5%). The biggest decrease in labour productivity has been observed in Yemen (by 45%) and Central African Republic (by 35%). On the demand side, domestic private consumption has been the main source of growth in all countries. The average share of household final consumption expenditure in GDP was more than 85% in all LDCs, except Vanuatu, South Sudan, and Yemen. In Liberia, the share was exceptionally high (more than 140%). The largest increase in the contribution of domestic private consumption to GDP was observed in Liberia and Yemen. The contribution of government final consumption expenditure to GDP was relatively high in Eritrea and Burundi. The share of gross domestic investment (gross capital formation) in GDP was very low in Guinea-Bissau, Togo, Central African Republic and South Sudan.

Table 2: Employment by sector in the analysed LDCs, 2000, 2015 (percentage of total employment) (Source: UNCTAD, 2016)

Country	Agriculture		Industry		Services	
	2000	2015	2000	2015	2000	2015
Burundi	91.7	91.1	2.4	2.5	5.9	6.4
Central African Republic	62.9	63.5	9.5	9.7	27.6	26.8
Comoros	65.4	65.1	9.7	9.6	24.9	25.2
Eritrea	72.4	70.0	7.2	7.8	20.3	22.3
Gambia	53.7	30.8	9.1	14.5	37.2	54.7
Guinea	74.8	74.7	6.3	5.6	18.9	19.7
Guinea-Bissau	60.7	50.1	9.7	12.1	29.5	37.8
Haiti	49.2	43.3	11.1	12.1	39.7	44.5
Liberia	48.9	44.8	10.4	11.3	40.7	43.9
Madagascar	74.2	73.0	10.1	9.1	15.7	17.9
Togo	56.9	50.8	6.7	7.7	36.4	41.5
Vanuatu	62.4	62.2	6.8	7.0	30.9	30.8
Yemen	41.2	32.4	14.4	17.5	44.5	50.0

Note: Data for Kiribati and South Sudan are not available.

<sup>1</sup> Vanuatu has a status of a tax haven.

<sup>2</sup> Data on labour productivity for Kiribati and South Sudan were not available in World Bank Open Data.

Exports of goods and services were an important driver of growth in Togo and Vanuatu. The average share of exports in GDP of those countries was more than 40%. Togo and Vanuatu recorded the largest increase in the share of exports in GDP, too. In the years 2001-2015, a half of the analysed countries experienced a decline in the share of exports of goods and services in GDP. Exports were a really small share of GDP in Burundi and Eritrea. After the outbreak of global crisis, oil exporters have been heavily affected by the fall in oil prices. According to the export specialisation (the type of exports accounted for at least 45 per cent of total exports of goods and services in the years 2013-2015) Burundi, Central African Republic, Comoros, Eritrea, Gambia, Kiribati, and Vanuatu are classified as services exporters. Liberia and Togo are mixed exporters. Haiti is considered to be a manufactures exporter and Guinea-Bissau an agricultural and food exporter. South Sudan and Yemen are fuel exporters and Guinea is a mineral exporter (UNCTAD, 2016). Remittances have been the primary source of foreign exchange in Haiti. In the years 2001-2015, they were equivalent to a fifth of the Haitian GDP. Remittances from diaspora have been important sources of income in Comoros, Liberia, Gambia, Kiribati, and Togo, too (Table 3). In recent years, the reliance of Eritreans on informal remittances from relatives abroad has increased. Remittances were estimated to account for more than 30% of Eritrea's GDP in 2015 (Harper, 2016). Least developed countries have benefited from official development assistance (ODA). During the analysed period, the average share of ODA in GDP was bigger than 10% in ten countries. Liberia, Burundi, Eritrea, and Kiribati have been the most aid-dependent countries. In the years 2011-2015, ODA accounted for 13% of South Sudan's GDP. Burundi, Central African Republic, Gambia, and Guinea-Bissau have been primarily supported by the EU Institutions. Comoros, Guinea, Madagascar and Togo received the largest development assistance from France. The United States were a major donor for Eritrea, Haiti, Liberia and South Sudan. Australia has been supported Kiribati and Vanuatu. It is worth noting that the analysed LDCs have been also intensively supported by emerging donors (Nowak, 2015). The only country that has attracted foreign direct investment (FDI) is Liberia. FDI flows into Liberia have been channelled into mining, forestry, agriculture, and infrastructure projects (Paczynska, 2016). However, investment in Liberia remains difficult because of low quality of energy and transportation infrastructure. FDI flows into Kiribati and Burundi have been negligible (Table 3).

*Table 3: Remittances, net ODA and net FDI inflows as per cent of GDP, 2001-2015 (Source: own calculations based on WBOD, 2017)*

Country	Remittances	ODA	FDI	Country	Remittances	ODA	FDI
Burundi	1.1%	26.8%	0.7%	Haiti	22.0%	14.1%	1.2%
Central African Republic	n.a.	13.0%	1.8%	Kiribati	10.1%	17.1%	0.3%
Comoros	17.1%	10.4%	1.1%	Liberia	15%	63.9%	35.4%
Eritrea (2001-2011)	n.a.	19.7%	2.3%	Madagascar	2.1%	9.8%	5.8%
Gambia	10.8%	12.4%	6.1%	Togo	9.1%	7.5%	4.6%
Guinea	1.3%	7.7%	4.1%	Vanuatu	2.3%	12.6%	6.2%
Guinea-Bissau	5.3%	14.6%	1.6%	Yemen	7.9%	2.3%	1.0%

*Note: Remittances data for Burundi and Liberia cover the period 2004-2015, for Comoros and Gambia 2003-2015, and 2006-2015 for Kiribati. ODA data for Vanuatu concern the period from 2001 to 2014.*

To attract more foreign investment the analysed LDCs have to improve the business climate. They are low ranked on their ease of doing business. What's more, they have a big problem with corruption. The most favourable environment for business and entrepreneurs was created in Vanuatu. The country ranks 90th out of 190 in the World Bank's Ease of Doing Business Survey for 2017 and is the least corrupt in the group (Table 4 and Table 5).

Table 4: Ease of doing business and Corruption Perception Index (Source: WBG, 2018; CPI, 2016)

Country	Ease of doing business, June 2017		Corruption Perception Index, 2016		Country	Ease of doing business, June 2017		Corruption Perception Index, 2016	
	Score	Rank	Score	Rank		Score	Rank	Score	Rank
Burundi	46.92	164	20	159	Kiribati	48.52	157	30.8 (2011)	95 (2011)
CAR	34.86	184	20	159	Liberia	43.55	172	37	90
Comoros	48.52	158	24	153	Madagascar	47.67	162	26	145
Eritrea	22.87	189	18	164	South Sudan	32.86	187	11	175
Gambia	51.92	146	26	145	Togo	48.88	156	32	116
Guinea	49.80	153	27	142	Vanuatu	63.08	90	35.3 (2011)	77 (2011)
Guinea-Bissau	41.45	176	16	168	Yemen	33.00	186	14	170
Haiti	38.24	181	20	159					

Note: The 2016 Corruption Perceptions Index ranks countries on a scale of zero (highly corrupt) to 100 (very clean).

At the bottom of the ease of doing business ranking are the following countries Eritrea, South Sudan, Yemen, and Central African Republic. South Sudan is also the most corrupt. It is ranked 175th out of 176 in the Corruption Perception Index in 2016. The Pacific countries have the highest quality of national governance in the group. In 2015, they achieved positive score for four of the six Worldwide Governance Indicators. Central African Republic and Yemen are countries with the poorest governance (Table 5).

Table 5: Average Worldwide Governance Indicators for the analysed LDCs, 2002-2016 (Source: WGI, 2017)

Country	Voice and accountability	Political stability and absence of violence/terrorism	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
Burundi	-0.98	-1.71	-1.21	-1.07	-1.17	-1.13
CAR	-1.15	-1.85	-1.54	-1.24	-1.49	-1.14
Comoros	-0.39	-0.43	-1.57	-1.33	-0.99	-0.78
Eritrea	-2.10	-0.76	-1.30	-1.99	-1.22	-0.57
Gambia	-1.02	0.07	-0.66	-0.42	-0.47	-0.63
Guinea	-1.10	-1.35	-1.09	-1.05	-1.35	-1.04
Guinea-Bissau	-0.83	-0.63	-1.26	-1.12	-1.32	-1.25
Haiti	-0.85	-1.12	-1.60	-1.03	-1.40	-1.32
Kiribati	0.75	1.21 (2003-2016)	-0.63	-1.05	0.30	0.08
Liberia	-0.46	-1.06	-1.33	-1.25	-1.10	-0.82
Madagascar	-0.41	-0.31	-0.81	-0.45	-0.59	-0.44
Togo	-1.00	-0.32	-1.37	-0.84	-0.90	-0.93
Vanuatu	0.50	1.02	-0.48	-0.52	0.31	0.12
Yemen	-1.25	-2.06	-1.11	-0.83	-1.21	-1.13

Note: Data for South Sudan are not available. Governance score ranges from approximately -2.5 (weak) to +2.5 (strong) governance performance.

Economic growth and development in the analysed LDCs has been constrained by civil war (Burundi<sup>3</sup>, Central African Republic, South Sudan, Yemen), political instability (Burundi, Comoros, CAR, Guinea, Guinea-Bissau, Haiti, Madagascar), vulnerability to natural disasters like fires (Comoros), extreme weather (Comoros, Eritrea, Haiti, Kiribati, and Vanuatu), and locust attacks on crops (Eritrea), shortage of skilled workers (Burundi, CAR, Kiribati, Guinea), poor condition of infrastructure (Burundi, CAR, Guinea, Guinea-Bissau, Haiti, Kiribati, Liberia, South Sudan), electricity shortages (Eritrea, Guinea, Guinea-Bissau, South Sudan), poor telecommunication infrastructure (Burundi, Eritrea), underdeveloped financial system, limited access to credit and financial instruments (Eritrea, Madagascar), weak legal system (Burundi, Eritrea, Guinea-Bissau, Madagascar), weak protection of property rights (Eritrea), strict foreign exchange controls and high interference of the state in the economy (Eritrea), military spending (Eritrea), and remoteness from international markets (Kiribati, Vanuatu). Another problem of the analysed countries is a young and rapid increasing population. In all countries more than a half of the population is under the age of 25.

### 3. PROGRESS IN ECONOMIC DEVELOPMENT

The analysed LDCs differ in the level of economic development. According to the Human Development Index (HDI), only Vanuatu and Kiribati are classified as medium human development countries. The remaining 13 LDCs are low human development countries. In the years 2011-2015, the largest progress in HDI was made by Togo, Guinea and Haiti. At the same time, the value of HDI declined in Central African Republic, Yemen, and South Sudan. Vanuatu is holding the first position in the group by the level of GDP per capita. In 2015, its GDP per capita (in constant 2010 US dollars) was 12.5 times bigger than that of the poorest Burundi. GDP per capita of Kiribati accounted for 57.2% of the Vanuatu's one. GDP per capita of the remaining countries was much smaller than 30% of the leader's GDP per capita. Life expectancy at birth has increased by more than 8 years in Liberia and 7 years in Guinea, Eritrea, and Central African Republic<sup>4</sup>. In Togo, South Sudan, and Madagascar people born in 2015 are expected to live more than 6 years than those born in 2001. The smallest progress in that field was made by Vanuatu. However, it is a country with the highest life expectancy at birth (72.2 years) in the group of 47 LDCs. There are great variations in life expectancy between the analysed countries. In Central African Republic people live 20.8 years shorter than in Vanuatu. Liberia followed by Yemen and Madagascar are leaders in the reduction of infant and under-five mortality (Table 6). In absolute terms, the number of deaths of children under one year of age per 1 000 live births has decreased in Liberia by nearly 63 and under-five mortality has been reduced by 100 deaths per 1 000 live births. In South Sudan infant mortality decreased by 44 deaths per 1 000 live births and under-five mortality by above 80 deaths. In Guinea-Bissau the ratios were 44 and 79, respectively. Despite these reductions infant and child mortality remain still high in both countries. In 2015, the infant mortality rate fluctuated from 23.1 deaths per 1 000 live births in Vanuatu to 91.5 in Central African Republic and under-five mortality from 27.5 in Vanuatu to 130.1 in Central African Republic. Maternal mortality ratio has been decreased the most in the Pacific LDCs. Vanuatu and Kiribati have the smallest maternal mortality ratios (78 and 90 deaths per 100 000 live births in 2015, respectively). In absolute terms, the largest progress in the reduction of maternal mortality has been made by Liberia (the decline by 535 deaths) and South Sudan (481). The maternal mortality is still a big problem in the African LDCs.

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<sup>3</sup> The Burundian ethnic-based civil war was lasting from 1993 to 2005.

<sup>4</sup> In the years 2001-2015, other LDCs made much more progress compared with Liberia. Life expectancy at birth increased by 19.3 years in Malawi, 16.5 in Zambia, 15.0 in Rwanda, and 14.2 in Tanzania.

Table 6: Reduction in infant, under-five, and maternal mortality ratios, 2001-2015 (Source: own calculations based on WBOD, 2017)

Country	Mortality rate, infant	Mortality rate, under-5	Maternal mortality	Country	Mortality rate, infant	Mortality rate, under-5	Maternal mortality
Burundi	40.5%	44.7%	22.5%	Kiribati	16.0%	18.4%	43.8%
CAR	19.0%	25.0%	25.9%	Liberia	54.3%	58.8%	42.5%
Comoros	24.0%	27.1%	30.8%	Madagascar	45.8%	51.9%	33.5%
Eritrea	38.9%	45.0%	28.4%	South Sudan	42.3%	46.5%	37.9%
Gambia	22.7%	39.8%	18.8%	Togo	29.7%	33.3%	22.4%
Guinea	38.5%	42.5%	30.2%	Vanuatu	2.1%	2.5%	43.1%
Guinea-Bissau	41.9%	46.1%	31.3%	Yemen	48.9%	53.8%	11.5%
Haiti	28.3%	31.9%	27.0%				

The largest progress in access to electricity has been made by Comoros (Table 7). Generally, the analysed LDCs have problem with electricity access. In 2014, more than 70 per cent of the population had access to electricity only in Comoros and Yemen. In the remaining LDCs more than 50% of the population lacked access to it. Guinea-Bissau, Vanuatu, and Guinea made the largest progress in access to clean and safe drinking water. In 2015, more than 90% of the population had access to improved water in Vanuatu, Gambia, and Comoros. In contrast, nearly a half of Madagascar's population had problem with access to improved drinking water. In all countries, except Gambia, the proportion of population using improved sanitation facilities has increased. However, in 2015, above 50% of the population had access to improved sanitation only in Gambia, Yemen, and Vanuatu.

Table 7: Changes in the access to electricity and improved water and sanitation (in percentage points), 2001-2015 (Source: own calculations based on WBOD, 2017)

Country	Access to electricity	Improved water source	Improved sanitation facilities	Country	Access to electricity	Improved water source	Improved sanitation facilities
Burundi	2.9	3.7	3.4	Haiti	6.4	-3.5	5.8
CAR	6.2	5.5	4.2	Kiribati	-25.7	7.1	4.9
Comoros	31.9	0.0	10.0	Liberia	n.a.	11.4	3.2
Eritrea	15.3	6.2	3.9	Madagascar	2.1	11.8	1.5
Gambia	16.2	6.9	-0.8	Togo	17.8	8.2	0.2
Guinea	9.9	13.0	6.6	Vanuatu	11.4	16.2	14.8
Guinea-Bissau	17.2	23.6	7.7	Yemen	19.7	-4.3 (2001-2012)	12.3 (2001-2012)

Note: Data for access to electricity cover the period 2001-2014.

The analysed countries have a big problem with poverty. For instance, in the years 2014-2016, more than 50% of the population were undernourished in Haiti and nearly 48% in Central African Republic (FAO, 2017). The countries are very different in terms of literacy. Less than a third of the population is literate in Guinea and South Sudan. Central African Republic has a literacy rate of 36.8%. In Liberia 42.9% of the population can read and write. Haiti has a rate of 48.7% and Gambia of 52%. In contrast, 92% of the population in Kiribati are literate (UN, 2017). Generally, Kiribati and Vanuatu are the most developed countries.



In 2015, the human assets index (HAI)<sup>5</sup> in Kiribati was 86.3 and 81.3 in Vanuatu while Central African Republic achieved the score 22.9 and South Sudan 29.1(UN, 2017).

#### 4. CONSLUSIONS

In the years 2001-2015, fifteen least developed countries had negative or very low average GDP per capita growth rates. GDP in those countries has been primarily generated through services and agriculture sectors. Except four LDCs, the industry sector has been contributed less than 20% to GDP. The poorest countries were highly dependent on agriculture which provided a living for the vast majority of their population. On the demand side, domestic private consumption was the main source of growth in the examined countries. The countries have been heavily dependent on foreign assistance. During the considered 15 years, ten least developed countries were classified as aid-dependent. Besides, remittances were a significant source of finance in five of them. The countries, except one, has not attracted foreign direct investment. Economic growth in the analysed LDCs has been mainly constrained by conflicts, political instability, recurrent climate shocks (drought, floods, earthquakes), weak institutions, pervasive corruption, poor governance, insecurity, and lack of basic infrastructure. Several least developed countries, despite the poor economic performance, have managed to improve significantly their development indicators. In the years 2006-2015, only Liberia achieved high GDP growth.

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<sup>5</sup> HAI is a composition of the following five indicators: under-five mortality rate, percentage of population undernourished, maternal mortality rate, gross secondary school enrolment ratio, and adult literacy rate. Lower values of HAI represent weaker human asset development.

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## THE ROLE OF AGRICULTURE IN THE DEVELOPMENT OF PERIPHERAL RURAL AREAS

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### ABSTRACT

*The development of peripheral rural areas is of fundamental significance to the development of rural areas. The economic and government changes in Poland during the 1990s deepened differences in the level of economic development, including in the development of agriculture and rural areas. Peripherality is always associated with a certain distance and concerns differences in socioeconomic development. Peripheral areas are present on different spatial scales. Permanent developmental disproportions reinforce divisions in the country's spatial structure. Persistent differences in the economic potential of individual regions constitute one of the basic problems of the modern economy. The concept of sustainable development calls for equalization of the differences between developed and peripheral regions. In Poland, 5 voivodships, making up 32% of the country's territory, are classified as peripheral areas. The goal of this article is to assess the developmental potential of peripheral areas and the role of agriculture in the sustainable development of these areas using Poland as an example. Developmental potential was assessed, and the results of equalizing developmental opportunities during the period of Poland's membership in the EU were indicated.*

**Keywords:** agriculture, development, peripheral, rural areas

### 1. INTRODUCTION

Peripherality is always associated with a certain distance and involves differences in the level of socioeconomic development. Peripheral areas exist on different spatial scales. Persistent developmental disproportions solidify divisions in the country's spatial structure. Sustained differences in the economic potential of individual regions are one of the fundamental problems of the modern economy. The development of rural peripheral areas is of critical significance to the growth of rural areas. The reasons for non-uniform development vary greatly and include historical neglect of economic development, demographic structure, settlement network and location relative to central places. Poorly developed regions are defined as problematic regions by the European Commission. Such regions are also called peripheral (Olechnicka, 2004; Bajerski, 2008; Leszczewska, 2011; Stanny, 2011; Proniewski, 2014). They are characterized by low economic potential in comparison to areas that are economically better-developed. The persistent nature of developmental disproportions leads to entrenchment of divisions in the country's spatial structure. Peripherality has multiple dimensions. It is most commonly perceived in the spatial sense, and so it concerns areas with a disadvantageous geographical location distant from economically strong centers. The main barriers to the economic development of peripheral regions are: low level of entrepreneurship, small labor market, inadequate development of the R&D sector and low level of innovation. These areas are characterized by a low quality of human and social capital as well as by deformation of demographic structures. Meanwhile, from a political and administrative perspective, peripheral regions are poorly represented within central authorities, have limited competencies, and their local authorities have scant financial resources (Miszczuk, 2010). The peripherality of rural areas is not always equivalent to the existence of problematic areas. Such a situation occurs in the case where the economy is diversified in peripheral areas where the population gathers income outside of agriculture. In addition, these areas are less vulnerable to economic crises since diversification of sources of income reduces the risk of their loss (Zawalińska et al. 2016).

The concept of sustainable development calls for equalization of the differences between developed and peripheral regions. The EU is striving to even out differences between regions in the Community through its cohesion policy. Studies indicate that, despite these measures, disproportions in the socioeconomic development of rural areas are not changing significantly within the spatial structure (Rosner et al. 2007). Systemic and economic changes in Poland during the 1990s deepened differences in the level of economic development, including in the development of agriculture and rural areas. In Poland, 5 voivodeships are classified as peripheral areas, making up 32% of the country's area. Peripheral regions in which the agricultural function is dominant should be subject to different assessment criteria. Certain researchers of the development of rural areas distinguish areas of economic success in agricultural activity (Bański, 2008). The Podlaskie voivodeship is one such area. In recent years, agriculture has undergone diversification and a group of commercial farms capable of competing on the domestic and European market has emerged. The Podlaskie voivodeship is one of the main beneficiaries of EU membership. The goal of this study is to assess the developmental potential of peripheral areas of Poland, with consideration of areas of agriculture-related economic success. The socioeconomic potential of all peripheral voivodeships was assessed, and the potential of agriculture and results of equalization of growth opportunities were assessed within the period of Poland's membership in the EU especially considering the Podlaskie voivodeship as an example.

## 2. METHODOLOGY

The research problem was undertaken on the basis of mass statistical data from GUS (Statistical Yearbook of the Regions) and the author's original studies conducted on agricultural holdings in the Podlaskie voivodeship. Studies covered agricultural holdings found in the FADN system and Statistical Yearbook of Agriculture. The following economic criteria were applied in assessment of socioeconomic development: GDP per capita, number of economic entities registered in the REGON system per 1000 residents, expenditures for R&D activity. The following criteria were applied in assessment of agricultural development: consumption of mineral fertilizers, value of commercial agricultural production per 1 ha, investment outlays per 1 ha. Analyses were conducted with respect to commercial farms. The results pertain to 2014 or 2015 (depending on availability of data), with reference to previous years.

## 3. RESULTS

The voivodeships of Eastern Poland developed at a relatively slower pace compared to the rest of the country. This was due to many factors, including historical neglect of development. Even the systemic transformation after 1989 did not change this fact. These voivodeships continue to be characterized by an unfavorable economic structure, deficiencies in the development of infrastructure, and macroeconomic indicators that are lower than the national average. Gross domestic product per capita (GDP *p. c.*) is a commonly used measure for assessment of economic development. This indicator is approx. 30% lower than the national average in all peripheral voivodeships. Changes of this indicator were small during 2010-2014, which indicates that disproportions in socioeconomic development have persisted for years (tab. 1). The level of GDP *p. c.* is below 40% of the average from EU-27. Over the past several years, the scale of differences in GDP *p. c.* increased at the regional and subregional level (GUS, 2016). This data confirms the results of studies conducted by other authors, indicating growth of the scale of differences in the level of socioeconomic development at the regional and subregional levels.

*Table following on the next page*

Table 1: Economic indicators (Statistical Yearbook of the Regions, 2016, p. 44-52)

Region	year	PKB per capita	Entities of the national economy per 10 thous. population	Research-development activity R&D (PLN per capita)
Poland	2010	100	1 024	273
	2014	100	1 088	470
Lubelskie	2010	67,2	762	168
	2014	69,8	809	342
Podkarpackie	2010	68,5	726	242
	2014	70,8	776	427
Podlaskie	2010	73,0	773	87
	2014	72,4	835	253
Świętokrzyskie	2010	77,6	859	132
	2014	73,0	879	207
Warmińsko-Mazurskie	2010	73,8	834	122
	2014	73,5	869	107

The economic activity of regions can be measured by the number of economic entities within the given area. Economic entities create jobs, absorb local material and human resources and increase the level of income generated in the region. The greatest proportions of economic entities to population are present in voivodeships with a high GDP, e.g. Mazowieckie voivodeship. In peripheral regions, the number of economic entities was lower than the national average. The lowest proportion of economic entities to residents is present in the Podkarpackie voivodeship. Analysis of statistics from GUS indicates that peripheral regions occupy the last places in the ranking of voivodeships. Another indicator providing information about economic development is the value of expenditures for R&D activity. From this perspective, peripheral regions fall behind the rest of country. R&D expenditures are 45% lower than the national average, with high variation between individual regions. Relatively, the enterprises located in the Podkarpackie voivodeship make the greatest R&D expenditures. Compared to Poland as a whole, this is only 9-11% less depending on the year. The largest industrial cluster in Poland is operating in this region, gathering entities from the aviation industry, which invest in modern technologies. In the other regions, R&D activity is at a much lower level, despite the rise in expenditures in 2014.

Table 2: Agricultural indicators 2015 y. (Statistical Yearbook of Agriculture, 2016, p. 494-520)

Region	Consumption of mineral fertilizers (kg·ha <sup>-1</sup> )	Commercial agricultural production (PLN·ha <sup>-1</sup> )		Milk production (l·ha <sup>-1</sup> )	
		crop	animal	total	family farm
Poland	123.2	1 279	2 643	884	903
Lubelskie	127.3	1 476	1 326	542	547
Podkarpackie	70.6	671	885	401	407
Podlaskie	88.7	186	3 765	2 424	2 456
Świętokrzyskie	121.8	820	1 784	533	530
Warmińsko-Mazurskie	97.9	792	3 059	965	1 049

The Podlaskie voivodeship is an example of good utilization of internal conditions for agricultural development. The value of sold production, which depends on global production, determines the relationships between farms and the market. The greater the value of sold

production, the greater the share of commercial production therein. In 2015, the value of commercial agricultural production amounted to PLN 3951 per 1 ha of farmland, the highest value in all peripheral voivodeships and 6th nationwide. 95% of the production structure is animal production (tab.2). The region specializes in milk production, and it occupies first place in the country with regard to milk production per 1 ha of farmland. Farming intensity can be assessed on the basis of consumption of means of production. Consumption of mineral fertilizers in the 2014/2015 season amounted to 88.7 kg per 1 ha. This is nearly 30% less than the national average (tab.2). This indicates that agricultural products meet high quality standards. Natural conditions foster the development of organic production. Interest in organic production is growing among farmers. In 2015, there were 2815 organic farms, representing a 46% increase from 2012. Only the Warmińsko-Mazurskie voivodeship registered higher growth of the number of organic farms (by 61%). Investment expenditures are indicative of developmental processes. Investment expenditures in agriculture have increased in peripheral regions in recent years. Investment expenditures in agriculture grew by 33.3% in the years 2012-2015 in agricultural holdings in the Podlaskie voivodeship. This is nearly 12% more than the national average (tab. 3). Of course, such changes did not occur in all farms. A significant part of farms, particularly small ones (42% are agricultural holdings up to 5 ha), were not capable of growth despite support with public funds. Low income of the population is the problem of peripheral areas. This is hardly a new phenomenon, as low income of the agricultural population compared to non-agricultural industries has been observed for many years. Poland's accession to the EU has had a positive impact on the income situation of the agricultural population thanks to subsidies granted to farmers under the Common Agricultural Policy. However, disproportions in incomes across the population persist. In peripheral regions, income per capita is lower than the national average, with the exception of the Warmińsko-Mazurskie voivodeship (tab. 3).

Table 3: Investment outlays and income (Statistical Yearbook of Agriculture 2013, p. 129; 2016, p. 131; Statistical Yearbook of the Regions 2016, p. 91)

Region	Investment outlays in agriculture and hunting (PLN·ha <sup>-1</sup> )		Gross income per capita (Poland =100)	
	2012	2015	2012	2015
Poland	300.10	364.60	100.0	100.0
Lubelskie	248.42	281,35	80.3	85.8
Podkarpackie	250.40	284.60	75.9	78.5
Podlaskie	284.10	378,82	84.0	82,6
Świętokrzyskie	264,55	282,00	88.4	86.6
Warmińsko-Mazurskie	265.21	363.52	104.8	104.6

In the years 2004-2014 there were changes in the studied farms of the Podlaskie region (tab.4). First of all, change in the equipment of farms of fixed assets (machinery and equipment) has took. These changes were influenced by agricultural policy.

Table 4: Characteristic of the surveyed farms in Podlaskie region (own research)

Year	Utilised Agricultural Area (ha)	Total fixed assets (thous.PLN·farm <sup>-1</sup> )	Gross investment value (PLN·farm <sup>-1</sup> )
2005	31.32	486.1	43 862
2010	34.51	613.0	49 461
2014	35.46	698.6	50 833
Change 2014/2005(%)	+ 13.2	+ 43.7	+ 15.9

#### 4. CONCLUSION

The strategy of sustainable development places a special emphasis on the potential of rural areas. Some of these areas are classified as peripheral areas, with a low level of socioeconomic development. In Poland, peripheral areas occupy nearly 1/3 of the country's area. The macroeconomic indicators of these areas are significantly lower than the national averages. Unfortunately, this is not consistent with the principles of sustainable development. The Podlaskie voivodeship is one such area. It is characterized by multiple features of peripheral regions that contrast with regions with a higher level of socioeconomic development. However, the Podlasie region is considered to be region of agriculture-related economic success. Data on agricultural production confirm this view. The analysis conducted indicates that improvement of agricultural holdings' economic situation has occurred in recent years. Support with public funds, mainly from the EU budget, has improved the economic situation and enabled development through investment. Besides small farms, modern commercial farms with high competitive potential, considered to be developmental, have emerged. The scope of changes remains insufficient when applied to the scale of the entire region, and there are still many small agricultural holdings that are incapable of development. They perform a function other than production, and for this reason, they require other forms of support. These small farms should be preserved on account of the stability of rural areas. Such a strategy is consistent with the concept of sustainable development.

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## HOW POWER VALUES INFLUENCE ON LEADERSHIP STYLE: A COMPARISON OF AUSTRIA AND SLOVENIA

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### **ABSTRACT**

*This paper examines how manager's power values influence on manager's leadership style in Slovenian and Austrian organizations. In that frame we test how individual level sub-dimension of values, including power, are influencing on manager's preferences about leadership style, framed into autocratic-democratic continuum. We draw upon our research on Schwartz theory of universal value structure and theory of leadership style based on autocratic-democratic continuum. Based on answers from 60 managers in Slovenian and 66 managers in Austrian organizations, and significant associations between personal values and leadership style, we found that with higher importance of power values for managers, their leadership style is becoming more autocratic in both examined samples; (2) with higher importance of tradition values, manager's leadership style is becoming more democratic in Slovenia and (3) with higher importance of benevolence values, managers' leadership style is becoming more autocratic in Austrian sample. Practical implications are aimed on selection influencing manager's preferences about leadership style.*

**Keywords:** *Austria, leadership style, personal values, power, Slovenia*

### **1. INTRODUCTION**

In recent years numerous management studies about behavioral factors emerged in response to the competitive pressures calling for improved manager's leadership. The literature offers plethora of evidences about the role and importance of several individual behavior factors like values, culture and ethics for shaping management leadership styles (Cater, Lang, Szabo, 2013; Egri, Herman, 2000; Fein, Vasiliu, Tziner, 2011; Hambrick, Mason, 1984; Lang, Szabo, Catana, Konecna, Skalova, 2013; Nedelko, Mayrhofer, 2012; Pastor, Mayo, 2008; Sarros, Santora, 2001). In the forefront of studies related with values – i.e. personal, group, organizational, are relations between culture and leadership styles, with mediate role of values, thus implying indirect influence of values on leadership style (Brodbeck et al., 2000; House, Hanges, Javidan, Dorfman, Gupta, 2004). Present empirical studies reported contradictory results about the directions and the strength of correlations between: (1) managers individual values and different types of leadership, and (2) managers individual values and different organizations – and their values, which operate in diversified environments – e.g. in transforming societies and emerging economies, countries from different culture clusters, etc. (Fein et al., 2011; Nedelko, Mayrhofer, 2012).



We followed previous studies, which utilize individual level personal values (Furrer et al., 2010; Nedelko, Potocan, 2014; D. Ralston et al., 2014), with examination of manager's individual level value dimension power, since power is an important attribute of management discussions about empowerment and authority (Hofstede, 2001a; House et al., 2004; Howell, Shamir, 2005; Tannenbaum, Schmidt, 1973). In that framework, we want to emphasize the overlooked role and importance of power values in shaping manager's leadership style. Survey sample includes Slovenian and Austrian managers. In both countries – Slovenia as case of central European cluster and Austria as case of Germanic cultural cluster, the power is highly appreciated (Brodbeck et al., 2000; House et al., 2004; Inglehart, 1997). By having two countries in the survey, we try also to assess the impact of value dimension power in on leadership style in frame of countries have different typical culture characteristics. The paper contributes to the abundant literature about significant influence of personal values on leadership style, by providing evidences about the influence of power values on manager's preferences about leadership style and what is the contribution of power values on shaping leadership style, in the frame of autocratic-democratic leadership continuum (Lang et al., 2013; Nedelko, Mayrhofer, 2012). Additionally, the paper provides evidences about the impact of power values on shaping preferences toward leadership styles of managers working in organizations, in frame of different cultural clusters – namely Slovenia and Austria (Hofstede, 2001b; Inglehart, 1997).

## **2. THEORETICAL BACKGROUND**

Among others behavior factors, manager's personal values play an important role in shaping of manager's leadership style (Cater et al., 2013; Cha, Edmondson, 2006; McKenna, 2012; Pastor, Mayo, 2008; Selznick, 1957). The link between manager's personal values and their leadership style is frequently examined, whereas the emphasis is often on the samples from well-developed western economies (Egri, Herman, 2000; Sarros, Santora, 2001). Another stream of studies – i.e. well-known GLOBE study, which is encompassing above 60 countries worldwide (House et al., 2004) and its various repetitions (Brodbeck et al., 2000; Cater et al., 2013; Lang et al., 2013), although their focus is on cultural dimensions as defined in by Hofstede (2001). Those studies are mainly performed cross-cultural and examine the association between managers behavior expressed through their personal values and prevailing leadership style in different cultural environments (Cha, Edmondson, 2006; Egri, Herman, 2000; Fein et al., 2011; Lang et al., 2013). Despite plethora of available researches the relative importance of power values in studies of management behavior is not broader recognized and emphasized. In terms of research streams important for our research are important theory of universal structure of personal values and research stream related to the leadership style of managers. According to behavior, we originate our research on Schwartz typology of personal values (Schwartz, 1992; Schwartz, Bilsky, 1987), as a leading theory in management empirical researches (D. A. Ralston et al., 2011). Schwartz proposed system of values, which include: 56 single values, which created ten individual level sub dimensions of values and which are further categorized into ten high order dimensions. We focus our intention on ten individual level dimensions of values, with special focus and deep examination on power values. Power values trigger actions related to attaining social status and prestige, and having a control over people, resources, and events (Schwartz, 1992; Schwartz et al., 2012). A second stream of the theoretical background is theory of leadership. Building on different well-known approaches to examine management behavior and leadership styles (McKenna, 2012; Yammarino, Dionne, Chun, Dansereau, 2005), we adopted autocratic-democratic continuum (Tannenbaum, Schmidt, 1973), whereas going beyond the initial decision making and participation focus, by including other typical characteristic of leadership style (Lang et al., 2013; Nedelko, Mayrhofer, 2012). For our consideration we emphasize following characteristics of leadership style (Bass, Avolio, 1990; Brodbeck et al., 2000; House et al., 2004; Selznick, 1957; Tannenbaum, Schmidt, 1973; Vroom, Yetton, 1973):

decision making in organization, control process in organization, responsibility for performing, possession of authority, using of power, focus and trade-off between goals and relations, and the level of cooperation between management and employees. We aimed our research on organizations from two countries, Slovenia and Austria, due to the fact that Austria is large export partner of Slovenia in last two decades and economies are tightly related. In spite of selected comparison, management researches also reported about strongly impact of culture on manager's leadership style in both selected countries (Brodbeck et al., 2000; Hofstede, 2001a). Less are investigated influences of individual factors of culture – i.e. values, personality, skills, etc. on leadership of managers, among considered countries. According to the dominant personal values in framework of different culture cluster, we considered two clusters (Brodbeck et al., 2000). In Austrian organizations, as example of Germanic culture, are in the forefront personal values connected with hierarchy, order, formality, regulations, etc.. In Slovenian organizations, as example of Central European culture, are emphasized importance of values related with benevolence, traditional solidarity, more informality, etc. (Brodbeck et al., 2000; Hofstede, 2001a). Irrespective of difference between values which are the forefront in organizations from both countries, several studies reported about wide range of use of autocratic style of leadership in organizations from both countries (Nedelko, Mayrhofer, 2012), which is also built upon power values (Brodbeck et al., 2000; Inglehart, 1997; Lang et al., 2013). In line with above presumptions about the universal impact of power on leadership style, we postulate following two hypotheses.

H 1: Manager's value dimension power has a significant impact on shaping manager's leadership style in Slovenian and Austrian organizations.

H 2: Manager's value dimension power has stronger impact on shaping manager's leadership style in Austrian organizations, than in Slovenian organizations.

### **3. METHODS**

#### **3.1. Sample and procedure**

Random sampling was done based on GVIN directory, which lists Slovenian organizations (Bisnode, 2016) and Aurelia, which lists Austrian organizations (Creditreform, 2016). We select organizations in the sample based on their percentages about size and industry, as provided by NACE (for Slovenia) and ÖNACE (for Austria) classifications. In the sample were included organizations having more than 50 employees, due to the possible non-typical roles of managers in smaller organizations. All respondents participated voluntarily in the survey. In both countries we used computer-assisted telephone interviewing, where we called managers in selected organizations and carry out interviews with managers at various positions. Maximum three answers from an organization were taken. Altogether 400 managers – 200 in Slovenia and 200 in Austria – at different management positions were contacted via telephone. In Slovenia we obtained 60 usable answers from managers, resulting in 30.0 % response rate and in Austria we obtained 66 answers, resulting in 33.0 % response rate. In terms of demographic characteristics of both samples in our survey we can outline following. Average age of participants in Slovenia is 47.98 years and managers on average have 23.88 years of working experiences, and in Austria average age is 46.68 years and managers are having on average 24.83 years of working experiences. In Slovenia 53.3 percent of participants are male and 46.7 percent are females, while in Austria 71.2 percent are males and 28.8 percent are females. In terms of education, in Slovenia 80 percent of participants have bachelor degree, 16.7 percent master degree and 3.3 percent doctorate degree and in Austria 47 percent of participants have bachelor degree and remaining 53 percent have master degree. Regarding position, in Slovenia 3.3 percent are lower managers, 26.7 percent middle managers and 70 percent top managers and in Austria 13.6 percent are lower managers, 30.3 percent middle managers and 56.1 percent top managers. Finally, in terms of organizational size, in Slovenia

96.7 percent of participants work in middle organizations having between 50 and 249 employees, while only 3.3 percent work in organizations having more than 250 employees. In Austria, 72.7 percent of managers work in organizations having between 50 and 249 employees and 27.3 percent in organizations having more than 250 employees.

### **3.2. Instrument used**

For field researching we used a questionnaire aimed at measuring values and various organizational and managerial aspects (Nedelko, Mayrhofer, 2012; Potocan, Nedelko, 2015). The questionnaire consists of three parts: (1) in the first part are listed 56 personal values and their descriptions from the Schwartz value survey (Schwartz 1992); (2) in the second part, participants are asked about characteristics of their organization, characteristics of their leadership style and their innovativeness; questions were formulated based on various leadership theories and corresponding studies; and (3) in the last part respondents answered to several typical demographic questions.

### **3.3. Measures**

Personal values – were measured using Schwartz Value Survey (SVS) (Schwartz, 1992). SVS includes a list of 56 single personal values. In the survey respondents rate each of 56 personal values using a 9-point Likert-type scale, ranging from “opposed to my values” (-1) to “of supreme importance” (9). In our examination we collapsed 56 single values in the survey into ten individual level sub-dimensions of values – i.e. groups of values, named: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security (Schwartz, 1992). Leadership style – each of the included characteristics selected for measuring management behavior was framed into leadership continuum (Nedelko, Mayrhofer, 2012; Tannenbaum, Schmidt, 1973). All items are measured using an 8-point Likert-type scale, with anchors referring to autocratic leadership style (1) and democratic leadership style (8). Based on exploratory factorial analysis of 25 items describing management behavior and reliability analysis, eight characteristics accurately and in reliable manner represent the leadership style (see Tannenbaum, Schmidt, 1973). Those characteristics are: (1) coordination of work in the organization is based on informal rules and procedures (1 – totally disagree; 8 – totally agree), (2) management in the organization is focused on employees and their needs (1 – totally disagree; 8 – totally agree), (3) authority in organization is delegated to the employees (1 – totally disagree; 8 – totally agree), (4) management in organization relies on personal power (1 – totally disagree; 8 – totally agree), (5) cooperation between management and employees is strong (1 – totally disagree; 8 – totally agree), (6) cooperation between management and employees is informal (1 – totally disagree; 8 – totally agree), (7) management is open for new ideas and knowledge of employees (1 – totally disagree; 8 – totally agree) and (8) management accepts risk (1 – totally disagree; 8 – totally agree). Cronbach alpha for the construct was .788.

### **3.4. Research design and analysis**

We used for analysis elements of descriptive statistics, factorial analysis, reliability analysis and hierarchical regression analysis. In the interest of space we did not outlined the zero-ordered correlations between variables of the interest. For examining the associations between personal values and leadership style, hierarchical regression analysis was used to determine the impact of ten dimensions of values on leadership style. Control variables, namely age, gender, education, position in the organization, working experiences and organizational size — were included first, followed by the ten dimensions of personal values. IBM SPSS 21 was used for calculations. Hierarchical regression analysis was carried out as suggested by Ho (2006) and to go along with the prevalent research practice D. A. Ralston et al. (2011).

#### 4. RESULTS

The results of hierarchical regression analysis for the impact of ten individual level-sub dimensions of personal values on manager's leadership style, considered on autocratic-democratic continuum, are outlined in Table 1.

*Table 1: Results of hierarchical regression analysis of individual level sub-dimensions of personal values on autocratic-democratic leadership style in Slovenia and Austria*

Model	R Square		$\beta$		T		Sig.	
	SLO	AUT	SLO	AUT	SLO	AUT	SLO	AUT
<i>1. Demographic and organizational variables</i>	0.123	0.191						
Age			-.314	.111	-.725	.335	.473	.739
Gender			-.179	-.064	-1.440	-.463	.157	.645
Education			.015	-.080	-1.420	-.444	.163	.659
Position in organization			.321	.060	.125	.370	.901	.713
Working experiences			.122	.080	1.925	.229	.061	.820
Organizational size			.090	-.349	.509	-2.346	.613	.023
<i>2. Personal values</i>	0.487	0.347						
Power			-.362	-.406	-2.298	-2.230	.026	.030
Achievement			.245	-.022	1.718	-.107	.093	.916
Hedonism			.055	.114	.282	.629	.780	.532
Stimulation			.015	-.027	.094	-.162	.926	.872
Self Direction			-.161	.250	-1.019	1.173	.314	.246
Universalism			.171	.202	.971	1.081	.337	.285
Benevolence			.242	-.470	1.438	-2.063	.158	.044
Tradition			.395	.163	2.350	.947	.023	.348
Conformity			.053	.076	.346	.330	.731	.742
Security			-.127	-.181	-.727	-.852	.471	.399

The results for Slovenia reveal that demographic and organizational variables accounted for 12.3 percent of variance in manager's attitudes towards their leadership style. Inclusion of ten sub-dimensions of personal values in the analysis increased explained variance up to 48.7 percent. ANOVA results reveal that entry of demographic and control variables yielded a non-significant influence on manager's leadership style,  $F(6,53) = 1.236$ ,  $p > 0.05$ . The inclusion of ten sub-dimensions of values revealed their significant association with manager's leadership style,  $F(16,43) = 2.552$ ,  $p < 0.05$ . Results in above table reveal that power has significant and negative influence on leadership style, indicating that with higher importance of power values, manager's leadership style is closer to the autocratic leadership style. Inversely, tradition has significant and positive influence on democratic leadership style, revealing that with higher importance of tradition values, manager's leadership style is more democratic. The control variables do not have significant effect on leadership style. The results for Austrian sample show that demographic and organizational variables accounted for 19.1 percent of variance in manager's attitudes towards leadership style. Inclusion of ten sub-dimensions of personal values in the analysis increased explained variance up to 34.7 percent. ANOVA results reveal that entry of demographic and control variables yielded a significant influence on manager's leadership style,  $F(6,59) = 2.321$ ,  $p < 0.05$ . The inclusion of ten sub-dimensions of values

revealed their in-significant association with manager's leadership style,  $F(16,49) = 1.626$ ,  $p > 0.05$ . In terms of the impact of personal values, power and benevolence significantly and negatively influence on leadership style, indicating that with higher importance of power values, manager's leadership style is closer to the autocratic leadership style and with higher importance of benevolence values, again manager's leadership style is closer to the autocratic leadership. In terms of control variable, organizational size influence on leadership style, indicating that manager operation in larger organizations, exercise more autocratic leadership style. Based on these findings, which reveal that manager's personal value power significantly and negatively influence on shaping leadership style in Slovenian and Austrian organizations, we can support Hypothesis 1, which states that "Manager's value dimension power has a significant impact on shaping manager's leadership style in Slovenian and Austrian organizations". Based on the results about the strength of the impact of power values on leadership style, the impact of power values is stronger in case of Austrian sample. In line with this finding, we can support hypothesis 2, which states that "Manager's value dimension power has stronger impact on shaping manager's leadership style in Austrian, than in Slovenian organizations".

## 5. DISCUSSION

The main purpose of this paper was to empirically examine the impact of power values on leadership style in two countries from Central Europe, namely Slovenia and Austria. Results from this study clarify the impact of power on leadership style, which is considered on an autocratic-democratic continuum. The key findings from our research regarding the significant impact of personal values on leadership style we can outline that: (1) with higher importance of power values for managers, their leadership style is becoming more autocratic in both examined samples; (2) with higher importance of tradition values, manager's leadership style is becoming more democratic in Slovenia; and (3) with higher importance of benevolence values, manager's leadership style is becoming more autocratic Austrian sample. The finding, that the impact of power values is stronger in Austrian than in Slovenian in sample, is in line with findings in prevailing research stream which is primarily oriented on the impact of national culture on leadership style (e.g. House 2004) – see also works of Hofstede (2001). The key issue in comparing our results with prevalent studies, lies in the fact that our approach is based on examining the values on the individual level. This mean that comparing findings, which are based on individual level and national values (i.e. considered as national culture) could be misleading, due to the possible difference between individual level and societal level values (D. A. Ralston et al., 2011; Rokeach, 1973; Schwartz, 1992). Keeping in mind this presumption, we compare our results with those in cross-cultural studies, considering national culture. In that frame, our results followed the presumption that power is very influential in autocratic environment, and for that reason is expected that power will have strongest impact, when we are dealing with autocratic vs. democratic leadership style (Armbrüster, 2005; Hofstede, 2001a) and utilization of power in organizations. Looking for the reasons for such results, we can also outline the findings from Nedelko, Mayrhofer (2012), which claim, that in Austrian organizations, leadership style is more autocratic than in Slovenian organizations. Looking for evidences in same cultural cluster – e.g. Germanic cultural cluster, for instance Lang et al. (2000) in their research about leadership styles in Slovenia and Germany emphasize, lower percentage of democratic leadership style among German managers, in comparison to Slovenian managers. Building on the findings that in German cultural cluster, more autocratic leadership style is present, than in Central Europe (i.e. Slovenia), the impact of power can be higher for Austria. The negative association between power values and leadership style for Slovenia and Austria sample, indicating, that with higher importance of power values managers exercise more autocratic leadership style is not surprising. Surprisingly is that in Slovenian

sample, the impact of power values is almost as high as in Austrian sample, despite that in typical Slovenia's cultural setting the role of power, hierarchy and seniority, is less present, than in typical German culture. Turning to the some other significant influences of personal values on leadership style is the one, which reveals that Slovenian managers, who highly appreciate tradition, exercise more democratic leadership style. This may be surprisingly from the mainstream of management and leadership literature, based on the cognitions from free-market economies with long tradition, which usually connects tradition with prevalence of autocratic leadership style. Inversely, from the perspective from former transition economy from Central Europe – as is case of Slovenia – this may not be so surprisingly, since in the history, where the self-management was in the forefront, and outlined participation of "workers" in the decision making process, at least at formal level. Thus, taken together, appreciation tradition, may refers to this idea, where companies were in hands of employees and the "self-management" was in the forefront. Somewhat surprisingly is also the association between benevolence values and leadership style in Austrian sample, where high importance of benevolence reflects in more autocratic leadership style. The key aim of the benevolence values is preservation and enhancement of the welfare of people with whom one is in frequent personal contact (Schwartz, 1992). In case of Austria, this striving for enhancement of welfare of other's is "reserved for the manager's or the managers take care the responsibility, by exercising autocratic leadership style". In terms of practical implications, our findings can be useful in following ways. Presented results show the possible way for development of personal values of leaders, which can be helpful for adaptation of leadership style. For organizations, our findings are useful for solving issues related to authority, utilization of power, and openness for ideas of leaders. By knowing the values, which drives manager's selection between autocratic vs. democratic leadership, organizations can focus on them and consequently help towards development of desired leadership style. For instance, if organization wants to focus on improving organizational efficiency and effectiveness, maybe more autocratic leadership should be prioritized (Hassan, Mahsud, Yukl, Prussia, 2013; Yukl, 2008). Although, a word of caution is needed, due to the stability and endurance of personal values, which importance is rather difficult to change (Griseri, 1998; Nedelko, Potocan, 2013; Rokeach, 1973). In terms of limitations, this draft paper has at least following limitations; (1) focus only on two countries in Central and Europe, what limits generalization of finding; (2) limited number of characteristics for considering leadership style is used in our study; (3) using self-assessment scale, where differences could emerge, especially due to the sensitivity of the topic – i.e. utilization of power and revealing honest answers about utilization of power; (4) and inclusion of limited number of answers from both included countries, due to the early stage of the research. Based on this preliminary research several future research directions are possible; to expand the survey to other countries in order to verify the impact of power values on autocracy vs. democratic leadership style in areas having different dominant national values; to include more dimensions that describe autocratic vs. democratic leadership style; and include more answers from managers in both countries.

## 6. CONCLUSION

The main purpose of this draft paper was to examine the impact power values on manager's preferences about utilization of either more autocratic or either more democratic leadership style. Results regarding the association between personal value and leadership style, revealed that in both economies, power has strong influence on leadership style, where with heightened importance of power values, the leadership style is becoming more closer to the autocratic leadership style. The results offer also some surprising results, like the strong importance of tradition values for democratic leadership style in Slovenia and benevolence values for autocratic leadership style in Austria. Findings from this paper, coupled with early stage of the

research process, calls for more comprehensive study, which will include more answers in the future in order to obtain more accurate results on which manager's in organization can base their future actions.

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## THE ROLE OF MUNICIPALITY IN PROMOTION OF WELL-BEING: DEVELOPMENT OF PUBLIC SERVICES

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### **ABSTRACT**

*Main operational goal of municipality is to serve the society. In order to ensure the democratic municipal operation, it is necessary to involve citizens in decision-making process, create conditions for them to express the opinions, to listen to those opinions, provide access to information and inform about the topicalities, ideas and plans. Municipalities have ability to directly influence the well-being of their citizens, providing services to them. In order to develop services, municipality citizens are satisfied with, it is necessary to involve them in development of these services. Taking into account all mentioned before the purpose of the study is to analyse the importance of engagement of society in development of public services in the municipalities. In order to achieve the purpose, the tasks are formulated as follows:*

- 1) to review the theoretical background for engagement of society in decision-making processes at local level;*
- 2) to analyse the best practice of municipalities in engaging of society in development of public services;*
- 3) to provide the recommendations for municipalities for engagement of society in development of public services for overall well-being.*

*Research methods used: scientific literature studies, structured interviews, statistical data analysis, scenario method.*

*The research conducted in one of the municipalities in Latvia showed that the quality of public services affects the well-being of citizens. Therefore, in order to have a greater effect on citizens' well-being, it would be needed to engage public in different phases of service development – in planning, implementation, development and evaluation.*

**Keywords:** *municipality, public services, well-being*

### **1. INTRODUCTION**

All around the Europe a significant reform has been started in public sector in order to improve the quality of public services. During last years, many efforts have been addressed at implementing several initiatives that would affect different typologies of service offered (i.e., health services, education, waste management, elder people care, etc.) and levels (local and central government) of the public sector, aimed at providing an easy access to more common administrative services, modernizing them, simplifying and making the administrative action of local and central government more efficient by decreasing operation costs and improving how resources are used, ensuring greater accountability and improving the quality of services delivered to users, being consequently more customer focused and responsive to the needs of stakeholders, and reducing time needed to make plans and fulfil projects (Storto, 2016). One of the way how to improve the quality of public services is decentralization. This strategy is considered to ensure greater savings in the public expenditure amount and administrative efficiency. Growing decentralization of the administrative power, the fiscal and administrative responsibilities from the central to the local government level, in order to improve efficiency

by specializing public expenditure and better meeting the needs of the territory, and even stimulating competition between municipalities in the allocation of funds from the central government. In particular, literature suggests that decentralization of tasks and responsibilities to local governments improves allocative efficiency better matching public services to preferences and needs of the residents, increases the efficiency of public service provision by reducing corruption, waste, and poor governance, and enables yardstick competition between different organizations and local authorities (Azfar, Kahkonen, & Meagher, 2001; Barankay & Lockwood, 2007; Storto, 2016;). In this scenario, local governments, i.e. municipalities, have become primary players of the public sector reform action. Further, as Rondo-Brovetto and Saliterer (2007) emphasize, local communities are key elements in the organization and governance of economic growth and value creation. In case of Latvia, the main normative act regulating the work of local governments is the Law "On Local Governments". Although this law does not directly mention the role and importance of local governments in ensuring the well-being of the citizens in the territory of the municipality, the autonomous functions of local governments established in Article 15 of the Law, which are the basis for the work of the local governments and the formation of the budget, are expressly, but clearly, indicated to this role and significance. Autonomous municipal functions like organization of public utilities for the citizens, improvement of the administrative territory, provision of education and culture services, access to health care and social assistance, etc. (Latvijas Vēstnesis, 1994) are undoubtedly related to the provision of well-being to citizens. Taking into account mentioned before, the purpose of the paper is to analyse the importance of engagement of society in development of public services in the municipalities. In order to achieve the purpose, the tasks are formulated as follows:

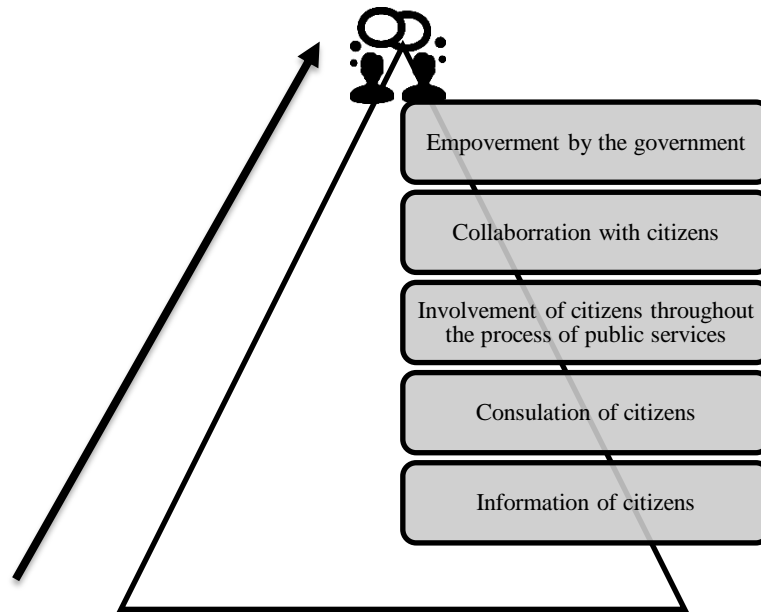
- 1) to review the theoretical background for engagement of society in decision-making processes at local level;
- 2) to analyse the best practice of municipalities in engaging of society in development of public services;
- 3) to provide the recommendations for municipalities for engagement of society in development of public services for overall well-being.

Research methods used: scientific literature studies, structured interviews, scenario method.

## **2. THEORETICAL BACKGROUND FOR ENGAGEMENT OF SOCIETY IN DECISION-MAKING PROCESSES AT LOCAL LEVEL**

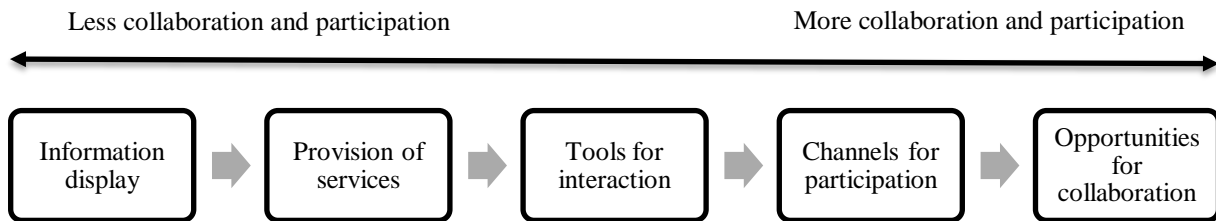
The International Association for Public Participation (IAP2) defines five levels of public participation in the formulation of public policy (see Fig.1). The first two levels are identical with those suggested by OECD, respectively public information and public consultation. IAP2 unfolds the third level of the OECD model into three distinct levels. Thus:

- 1) Information of citizens e.g. web sites, information newsletter;
- 2) Consultation of citizens e.g. focus groups, surveys, public meetings;
- 3) Involvement of the citizens throughout the process of public policies, in order to ensure that opinions of various stakeholders are understood and taken into consideration. Techniques to consider may include: workshops, public meetings;
- 4) Collaboration with the citizens when governmental organizations collaborate and partner with various interest groups at each stage in the development of a public policy, from problem identification to evaluation. E.g. citizen advisory, various committees, participatory decision making;
- 5) Empowerment by the government of various interest groups for implementation of a public policy, so both the decision and the responsibility to achieve the agreed objectives are transferred to these groups and the final decision making is placed in the hands of the public (Cosma & Jovanova, 2013).



*Figure 1: Five levels of public participation in public policy (Cosma & Jovanova, 2013)*

Scholars and practitioners argue that the most important interactions between citizens and government happen at the local level (Sandoval-Almazan & Gil-Garcia, 2012). Indeed, there are many possibilities to involve citizens in daily life of municipality. There are different ways how to ensure the engagement of society in decision-making processes at local level. In the last decade, there has been a growing theoretical debate about the effects of ICT – particularly online technologies – on civic engagement. This debate is essentially polarized between those who hail online technologies as facilitating social spaces in which virtual solidarity and activism are produced (Wellman, Haase, Witte, & Hampton, 2001) and those who bemoan online activities as indicative of the rise of consumerism over citizenship, the fragmentation of social relations and the consequent erosion of civic engagement (Levine, 2000). In this regard, Barraket (2005) highlights that although the empirical research to support either position in this debate remains limited, works such as that conducted by Horrigan (2001) suggest that some people are using ICT to engage in new forms of collective activity, and to access more traditional forms of civic activity in new ways. In this light, local governments may indeed support a process of creative encounter between them and citizens by a coordinating mechanism based on ICT, so that cross-cultural engagement may ensue from the resulting complementary talents around such ICT (Go, Lee, & Russo, 2003). Research also indicates that e-government websites could be the gateway to electronic channels for participation of citizens in decision-making (Barnes & Vidgen, 2007). Through the use of online surveys, forums, and other applications, participation and interaction with government officials and agencies, including local authorities, has expanded (Ong & Wang, 2009). However, the regular use and update of these channels is important for citizens. Lack of activity and inaccurate or outdated information may cause citizens to avoid the government portals (Resca, 2010). Finally, the use of electronic channels can be improved with an online strategy that personalizes government information for citizens, based on details like location or demographics, to provide better information for individual decision-making. In process of elaboration of instruments for engagement of society in decision-making processes, including information channels, at municipalities, it is important to ensure opportunities for citizens to react and to participate. For example, web site of municipality is a great tool to engage citizens in decision-making process.



*Figure 1: Different functions of municipalities' web sites (Sandoval-Almazan & Gil-Garcia, 2012)*

Fig. 2 presents a variation on these components, which position them as functions in a continuum from less collaboration and participation to more collaboration and participation (Sandoval-Almazan & Gil-Garcia, 2012).

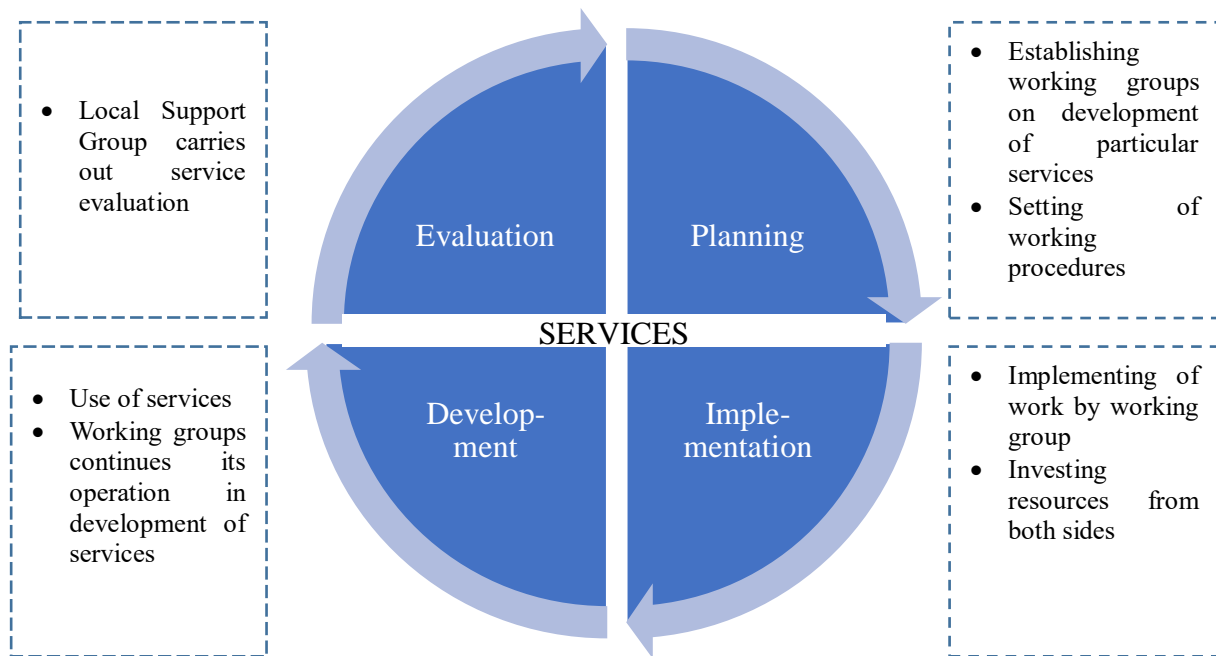
### **3. THE BEST PRACTICE OF MUNICIPALITIES IN ENGAGING OF SOCIETY IN DEVELOPMENT OF PUBLIC SERVICES**

The past decade has seen a variety of efforts to modernize public administration and transform the delivery of public services in many countries. The majority of efforts focuses on improving the efficiency and effectiveness of internal government operations, communications with citizens and transactions with individuals and organizations, by making information and services available on the Internet (Feller, Finnegan, & Nilsson, 2011). The internet has the potential to contribute to the delivery of better public services, to render the relationship between citizens and political and administrative institutions more interactive, and to revitalize democracy and encourage participation. In this context, the purposes of the ICT use of the elected have differentiated and diversified. As far as the current states of affairs are concerned, the elected have noticed the web-based social media tools in terms of direct interaction with citizens. The social media tools (such as blogs, Twitter, Facebook and YouTube) have increasingly become major channels to disseminate information, to establish direct contact with the public and to provide services. Many institutions of municipality have begun to share videos via YouTube, be available in the Facebook and other social networks and offer information through blogs and microblogs such as Twitter (Bertot, Jaeger, & Hansen, 2012; Jaeger, Bertot, & Shilton, 2012; Kavanaugh et al., 2012). Generally speaking, it is expected that the social media tools are to boost transparency and accountability in the public sector, including in municipalities, to enhance the delivery of public services and to improve policy-making by enabling the public to take part in decision-making processes (Bertot, Jaeger, Munson, & Glaisyer, 2010; Bonsón, Torres, Royo, & Flores, 2012; Chun, Shulman, Sandoval-Almazan, & Hovy, 2010; Mergel, 2013; Picazo-Vela, Gutiérrez-Martínez, & Luna-Reyes, 2012; Snead, 2013). Another possibility is using email on the websites that can enable more engaged and personalized connections between citizens and public servants on a regular basis (Matheus & Ribeiro, 2009). A simple email directory allows citizens to directly contact the person involved in their problem or need (Ong & Wang, 2009). Another participation channel is a blog. This tool provides a human side to the websites and promotes citizen engagement because they provide a public official's "personal opinion" and citizens can better understand their decisions or debate them. Gil-Garcia and Gonzalez-Miranda (2010) propose several elements that constitute channels for participation in government websites. An interesting research on using the Twitter to communicate with citizens and involve them in decision-making processes was done in Turkey (Sobaci & Karkin, 2013). All accounts of elected mayors were analysed. It was found out that one of the significant category (besides news sharing, activity sharing, personal

message and direct communication with citizens) was "Better Public Service". The number of tweets sent by provincial municipality mayors to improve local public services reached 167 (5.91%). During the study, it was concluded that Twitter could be a good tool in developing the communication with citizens about public services. Another study was provided for 217 Italian and Spanish municipalities which were using Facebook. It showed that social media offer governments a new approach to improve transparency and accountability, involving increasingly citizens to participate and collaborate in decision making to improve information management and access as public service (Guillamón et al., 2016). Of course, very important is also personal presence of citizens in engagement in development of public services. An interesting example of public participation was in Kratovo municipality (Republic of Macedonia) in renovation of a cinema initiative. In 2009 there was a citizen's petition submitted to the municipality, in which 200 citizens asked for a renovation of the cinema venue. Based on this citizens' initiative, the municipality in cooperation with the regional centre for NGO support in Kratovo and a consultant company developed a project proposal. In April 2011, the municipality applied for a grant at the "Citizens' Forum Programme" for infrastructure project in the area of culture, financially supported by the Swiss Development Cooperation (SDC). The project proposal was discussed at five consecutive Citizens' Forum Sessions in the period September – December 2011. Each citizen that participated in at least three forum sessions had the right to vote in the final procedure of adoption of the decision to submit this project proposal for financing. In the beginning of 2012 the tender procedure for the approved project proposal was finalized and by the end of 2012 all the construction work was also brought to an end. The financial construction for the project is jointly shared by the municipality, central government and the SDC Citizens' Forum Programme (Cosma & Jovanova, 2013).

#### **4. RECOMMENDATIONS FOR MUNICIPALITIES FOR ENGAGEMENT OF SOCIETY IN DEVELOPMENT OF PUBLIC SERVICES FOR OVERALL WELL-BEING**

A clear relationship has not been found between the modes of public services delivery and the well-being of citizens of municipality. However, some researchers have found that good public services improve the well-being of citizens. Many of previous studies have generally focused on objective well-being (Wang et al., 2017; Hamann et al., 2016; Hossain et al., 2017; Hou et al., 2014). In addition, there are some studies there the linkages between subjective well-being and public services is being analysed (Bryce et al., 2016; Yang et al., 2013). At the same time, some efforts have been made to unravel the linkages between public services and citizens well-being and elucidate their implications for decision-making processes, especially ecosystem public services (Ciftcioglu, 2017; Terrado et al., 2016). For example, Jekabsons and Sloka (2015) provided research results on subjective well-being in municipality of Salaspils. In this research, citizens defined subjective well-being indicators and evaluated the situation in the municipality according to them. According to citizens, one of the most important indicators was indicator "Access to public services". Citizens admitted that for their well-being they wish that wide range of public services, especially related to leisure and development, would be available at municipality. As described above, municipalities have the potential to directly affect the well-being of their citizens by providing them with services. During the research, the interview of municipality council members was organised. According to Jānis Nebars, a member of the Salaspils Municipality Council, admitted that "provision of public services is very important in all municipalities; wealthy municipalities have more opportunities to develop public services. However, in all cases the involvement of society should be ensured in development and improvement of public services. People have a tendency to evaluate higher those services which they had an opportunity to develop".



*Figure 3: Social involvement in development and improvement of municipal services: recommendations for municipalities (author's compilation)*

Taking into consideration mentioned before, in order to develop services, municipality citizens are satisfied with, it is necessary to involve them in development of these services. Usual practice in municipalities is to involve citizens in evaluation of services, however, in order to have a greater effect, it would be needed to engage public in earlier phases of service development – in planning, implementation and development (see Figure 3.). One of the way to involve the citizens in improvement of public services is to set up working groups, which would include representatives from the municipality administration/ authorities and local NGOs. The members of working groups would work for the development and improvement of identified services. In order to achieve measurable results, the working group identifies specific work procedures (plans) for improving a particular service. In addition, it is very important that both the representatives of municipality and society would invest some resources in the development or improvement of the service. For example, in order to improve the children's interest education, responsible NGO together with the support of the municipality administration would prepare a project application for the creation of a science optional lessons at school. Thus, external funding for the development of such activity would be attracted, the municipality would provide premises and consultation during the preparation and implementation of the project, while the members of NGO would invest their knowledge and skills in the education of children.

## 5. CONSLUSION

The research showed that municipalities have an ability to directly influence the well-being of their citizens, providing services to them. In order to develop services, municipality citizens are satisfied with, it is necessary to involve them in development of these services. In this context, in the last decade, there has been a growing theoretical debate about the effects of ICT – particularly online technologies – on civic engagement. Researchers and academics admit that there are many tools for municipalities to use to effectively communicate with citizens about public services, especially involving them in development and evaluation of provided services (like social networks, web sites, blogs, emails, etc.).

The study of municipalities showed that there is growing number of municipalities that are using different tools in engagement of citizens in decision-making processes, particularly in development of services. The research conducted in one of the municipalities in Latvia (Salaspils) showed that the quality of public services affects the well-being of citizens. Therefore, in order to have a greater effect on citizens' well-being, it would be needed to engage public in different phases of service development – in planning, implementation, development and evaluation. Thereby, the satisfaction of citizens (other words - subjective well-being) would be higher, especially in cases where citizens contribute with their own resources.

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## **ELEMENTS OF TOURISTIC ATTRACTIVENESS OF THE FOREST AREAS: A CASE STUDY BASED ON THE BIALOWIEZA FOREST MICRO-REGION**

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### **ABSTRACT**

*The aim of the article is to identify the resources that decide about the attractiveness of the touristic space of the forest areas. The article reviews the literature from the scope of attractiveness of the touristic space and discusses the research methods used in identification and evaluation of the touristic attractiveness. The empirical part assesses the attractiveness of forest areas on the example of developing tourism in the micro-region covering the Bialowieza Forest complex, including the Bialowieza National Park. The diagnostic survey method was used in the assessment of tourist attractiveness. The factors affecting the feeling of the satisfaction from the holiday stay were adopted as indicators of the touristic attractiveness. It was proven that in the perception of the area in the category of touristic attractiveness, the nonmaterial factors play an important role. Their origin is associated with creating the climate by the natural resources and human capital. In a significant way the attractiveness of the touristic stay is influenced by the attractiveness of the recreational offer of the place.*

**Keywords:** *Tourist potential, tourist value, satisfaction*

### **1. INTRODUCTION**

Because of the decreasing potential of the natural resources in the world, the environmentally valuable areas are significant for maintaining the natural balance of ecosystems. However, the problem is the socio - economic development of the urban areas within the localities of natural complexes or in their vicinity. The environmental protection systems significantly reduce conventional methods of farming. Therefore, tourism is considered to be the sector of economy, which has the potential of influencing the positive socio-economic balance. Despite the widely recognized advantages of environmentally valuable areas as resources on the base of which the socio-economic development may take place, still touristic functions of these areas are small and revenues from tourism represent a marginal part of the revenues of municipalities and the local population. For the majority of the local people engaged in tourism, it is just an additional source of income. In order to make tourism a primary source of income, it is necessary to create the touristic product, based on the resources, which constitute the "marker" and which decide about the supremacy of the comparative touristic space. The aim of the article is to identify the resources that decide about the attractiveness of the touristic space of the forest areas.

### **2. THE CATEGORY OF THE TOURISTIC ATTRACTIVENESS – THE REVIEW OF LITERATURE**

The concept of the touristic space attractiveness is a complex category. According to Page [1995] it can be interpreted from three perspectives: as a subjective assessment of individuals which is a result of a subjective perception, as an attractiveness determined through qualification, categorisation etc., or as an attractiveness resulting from adopting a particular assessment technique. Usually, the touristic attractiveness is defined on the basis of the group of traits [Pearce 1991], features [Kurek 2007] or elements [Ritche, Sins 1978], resources, products, images, attributes [Lew 1987], which together, or each separately, should be subject to the tourist's interest and should have the strength with which the existing objective resources are able to elicit interest and attract tourists [Gunn 1972; Hede & Hall 2006]. Mayo and Jarvis

[1981] classify the concept of touristic attractiveness as the notion of destination attractiveness as “the perceived ability of the destination to deliver individual benefits”. As the concept of traits, factors, elements or features of the touristic space the authors consider the natural and anthropogenic resources, development of tourist facilities and the results of environmental activities, the availability of communication price level, attitudes of the local population towards tourists and tourism. These are all the elements and functions, which are hidden in the structure of the touristic space that is determined in the natural sciences as a potential tourist area, whereas in the economic sciences as resources/ economic goods of the space. These features can be divided into the basic (ambient) and secondary (formed) categories [Laws 1995]. To the secondary category, the changes introduced especially for tourists, such as hotels, catering, transport, entertainment, trips, sports, and recreation facilities adjusted to the preference of the tourists. The basic resource does not exist without the extended range of services that visitors use to enjoy the attractions [Swarbrooke 2002, Wanhill 2003]. Attractive to tourists may be an area, region, tourist destination [Pearce 1991] np. center or old market square a particular object [Jaremen et al. 2010]. Elements that create a tourist attraction are more complex because they may have not only physical nature, but also intangible one [Lew 1987]. A similar view is found in the work of MacCannell [2002], where the author concludes that touristic attractiveness is subjective, and it is the result of individual preferences and requirements regarding conditions of recreation. It is also assumed that the attractiveness of the resources of the touristic space is significantly influenced by the touristic preferences, fulfilment of the satisfaction, attitudes of loyalty, benefits and motivations of tourists, positive opinions on tourist servicing, the opinions of celebrities, the volume of expenditure and the duration of the stay [Henkel et al. 2006]. You can say that the natural and anthropogenic elements have the greatest impact on touristic attractiveness, elements are different and have their ranks, and their ranks influence the tourist value. A similar view is shared by the Australian researchers [Henkel et al. 2006] who are of the opinion that the resources occurring in the touristic space are differentiated by rank, with those the most important being connected to the number of days of stay and the amount of the spent financial means, they define as attributes. It is worth mentioning that the touristic attractiveness is also determined by the new, created by the touristic space, resource of the psychological sphere the climate of space. We can say that the touristic attraction is everything, which arouses the interest of tourists and encourages them to leave the house, constituting the major destination of the undertaken travel. The result of this is that more and more often in the characteristics that influence the attractiveness of the touristic space are involved also the social, demographic and economic elements, which include: character of local communities, the resources of free labour, the level of education of the local community in regard to the use of tourist traffic as well as the demographic structure, the level of prices and the possibilities of issuing credit for the touristic investments and of raising funds for touristic purposes. From the economic point of view, touristic attractiveness is a category defined as a force, with which the place, object or phenomenon attracts the visitors or as a degree of saturation of the assigned spatial arrangements with various factors [Gunn 1972; Pearce 1998]. These factors can be classified into four systems of variable spatial characteristics such as:

- size and quality of natural resources, which are the primary force conditioning the emergence and development of tourism in the area,
- level of touristic development,
- the communicational accessibility to the region and guaranteeing an adequate mobility of tourism in the region,
- the complementary services, including: tourist information centers, trail markings, road markings and saturation with information boards and health and safety, including environmental security [Cheng- Fei Lee et al. 2010; Jedlińska et al. 1994].

It should be noted that in economy one can speak of touristic attractiveness when the abovementioned features of the touristic attractiveness of the space are determined as a sum of subjective and objective evaluations of individual elements of the touristic offering, are contained in the limits determined by the specified level of process and tourists' income [Wodejko 1998]. According to the author, touristic attractiveness can also be defined from the point of view of the subjects of the touristic offer. At that time, touristic attractiveness constitutes the outcome of the amount of the concluded market transactions, number of touristic arrivals and the amount of the region's revenues from the touristic sector. In conclusion, it must be said that the concept of touristic attractiveness includes elements of qualitative and quantitative nature that have the ability to attract tourists, is a category of the individual perception of a tourist, results from individual preferences and requirements relating to the residence conditions, from the tourists' expectations in regard of a tourist destination, experiences acquired during their stay and the memories preserved after the journey.

### **3. METHODS OF RESEARCHING THE TOURISTIC ATTRACTIVENESS**

In the research on the issue of the touristic attractiveness, two research trends can be distinguished: supply and demand. This results from the recognition of the universality and relativity of the category of touristic attractiveness. Universality occurs when the natural and cultural features as well as equipping of the area with the touristic infrastructure, having the nature of measurable and immeasurable features, are attractive to tourists in general. Whereas in relative terms the attractiveness of the area is examined from the point of view of the specific forms of tourism and recreation. This approach to the touristic attractiveness explains the emergence of two directions of research used in research of the touristic space attractiveness. The Universalist approach to the touristic attractiveness enables to conduct the research of the area's resources with the supply methods [Backman et al. 1991; Crouch 2008; Chang-Fei et al. 2010]. The inclusion of relativity leads to the use of methods to assess the touristic attractiveness based on the demand research, which is researching the opinion of tourists in the area of both, the perception of touristic resources and the achieved satisfaction for the holiday stay [Hu & Ritchie 1993; Kim 1998; Ritchie & Sins 1978, Jaremen et al. 2010]. More and more often the integrated approach is used, where in assessment of the touristic attractiveness of the space is used both the supply approach, in the category of researching the touristic space, and demand assessments, of inhabitants and the arriving tourists [Panfiluk, Szymańska 2015].

### **4. METHODOLOGY OF EXAMINATION OF THE TOURISTIC ATTRACTIVENESS OF THE ENVIRONMENTALLY VALUABLE AREAS**

For the study of the touristic attractiveness of the environmentally valuable areas, the Białowieża Forest micro-region was chosen as a representative area. The following factors determined its choice: existence of the natural complexes of the international importance in the researched area, acceptance of tourism as a main branch of economy in development programs of municipalities located within the area of the Białowieża Forest micro-region, obtaining the highest category of suitability of resources for tourism development in Podlasie Province [Panfiluk 2015]. The research was conducted with the questionnaire method with the use of the in-depth interview questionnaire. The study was conducted from August 2014 to September 2014. A total of 244 tourists vacationing in different parts of the Białowieża Forest micro-region were included in the sample research.<sup>1</sup>

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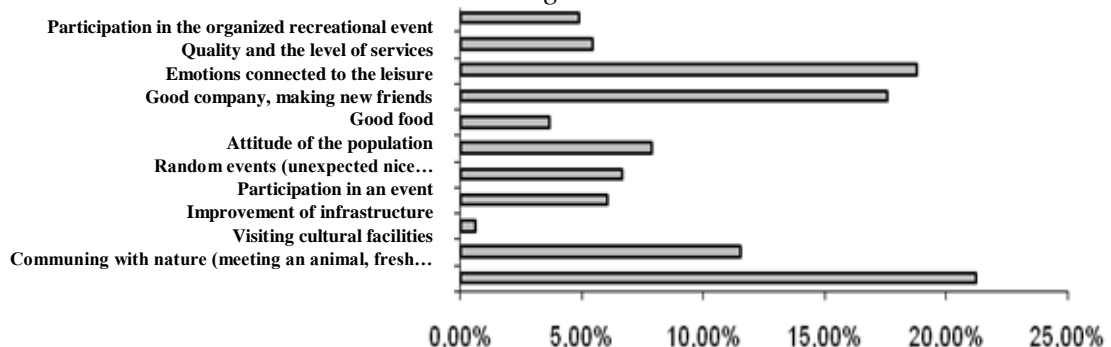
<sup>1</sup>The size of the sample research was calculated with the use of the statistical method, the confidence level of 0.95 was adopted, the estimated size of fraction at the level of the indicator of 0.5 and the maximum error of 0.065. With such indicators adopted, with the size of population of 30644 (number of people using the accommodation) the minimum size of the sample research is 226 tourists; the similar size of the sample research was achieved for the size of the population of 140000 (visitors of the Białowieża National Park) and it amounts to 227 tourists. Selection of subjects was carried out on a voluntary basis. All the volunteers underwent the examination.

In the research, the author has set a thesis that the resources of the natural ecosystems and animals and birds inhabiting it are “the markers” identifying the tourism space of the high degree of natural value, whereas the unique resources influencing the attractiveness of the tourism space are included in the category of intangible sensations and feelings of the tourist, which are influenced by the diverse features of tangible and intangible elements of space. The aim of this study is to identify the factors that determine the attractiveness of the tourism space of the forest areas. To prove the aim, factors influencing the gained satisfaction of the holiday stay and the factors influencing the feeling of discomfort of the recreation and deterioration of satisfaction from the holiday stay were used as the indicator of the touristic attractiveness. Then, according to the number of tourists’ indications, these factors were ranked in order to determine their importance in the perception of touristic attractiveness of the place.

## 5. THE ANALYSIS OF THE RESEARCH

From the point of view of the direction of the further tourism development on the researched area a significant resource that influences the choice of the journey destination is the natural diversity (71%), cultural diversity (32%), price (18%), originality of the tourist offer (18%) and folklore (12%) as well as cultural events (9%). The results allow concluding that the marker of attracting tourists to naturally valuable areas is above all the diversity of nature. The attractiveness of these areas is determined by the uniqueness (46%) and visual aesthetics of the landscape (30%). 65% of the respondents stated that they felt satisfaction with the tourist stay and 35% of respondents indicated dissatisfaction with the tourist stay. From among the group of respondents that declare obtaining satisfaction with the holiday stay, this state was influenced by the direct contact of the tourist with nature and animals living there (23%) and the contact with the environment, beauty of the landscape, peace and quiet (19%) (figure 1). It should be noted that intangible factor created by contact with nature affects the feeling of satisfaction of 40% of the tourists.

*Figure 1 Events that determine obtaining satisfaction of tourist stay in Bialowieza Forest micro-region*

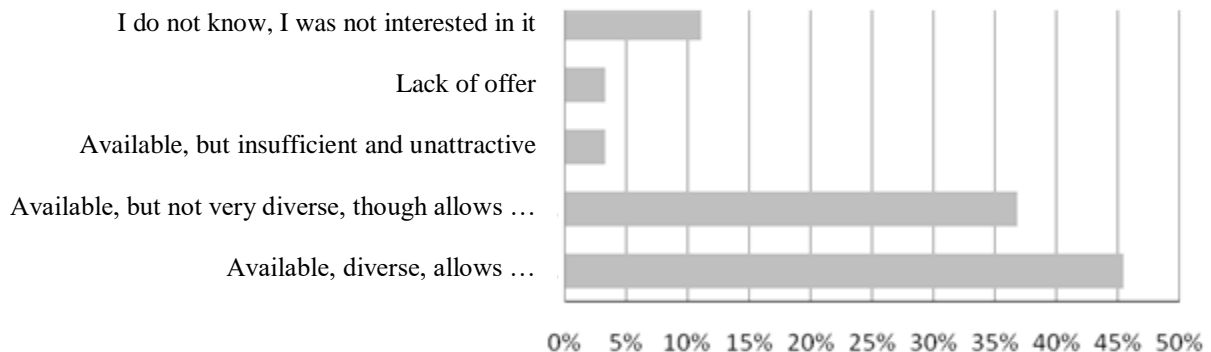


*Source: own work based on research.*

It should be noted that the general perception of the area in terms of the touristic attractiveness was influenced by the intangible factors, connected with being in a good company and making new friends. For 19% of the respondents, the good company was the source of satisfaction with the holiday stay. For 8% the source of satisfaction was the positive attitude of local people, their openness, honesty and hospitality, and for 7% of the respondents gained satisfaction from nice random events associated with an unexpected meeting or a state of pleasant weather during the leisure (figure 1). In total, the intangible factors created by the human capital were for 32% of respondents the source of satisfaction with the touristic stay.

For 12% of the tourists the source of obtaining satisfaction was tour cultural sites (Picture 2). According to 28% of the respondents, their attractiveness was decided by their uniqueness in the scale of the country and according to 24% of the respondents it is the saved regional nature of the places. Cultural event had an impact on feelings of satisfaction of 6% of the respondents. Its attractiveness is determined by the atmosphere of the place, the nature of the event and the company, as well as the proper organization. It should be noted that the overall study showed that among all the respondents 31% have participated in events, 38% of people have noticed the lack of cultural activities during their leisure, while 31% of the respondents were not interested in this type of offer. These results indicate, on the one hand, the low proportion of events in the creation of a tourist offer and, on the other hand, little difference between them that do not meet the expectations of as many as 31% of the tourists. The diverse choice of activities has an impact on obtaining satisfaction of a touristic stay for 5% of the respondents (figure 1). The general study of attractiveness of the tourism offer indicates that a diverse choice of activities is an important element of attractiveness of the researched tourist space. According to 45% of the respondents, it allows spending nice and varied time (figure 2). They point out that these are organized recreational events: the roasting of a boar, dances by the fire, horse-drawn carriage, trolley or narrow-gauge railway rides.

*Figure 2 Assessment of availability and diversity of tourist offer in the Bialowieza Forest micro-region*

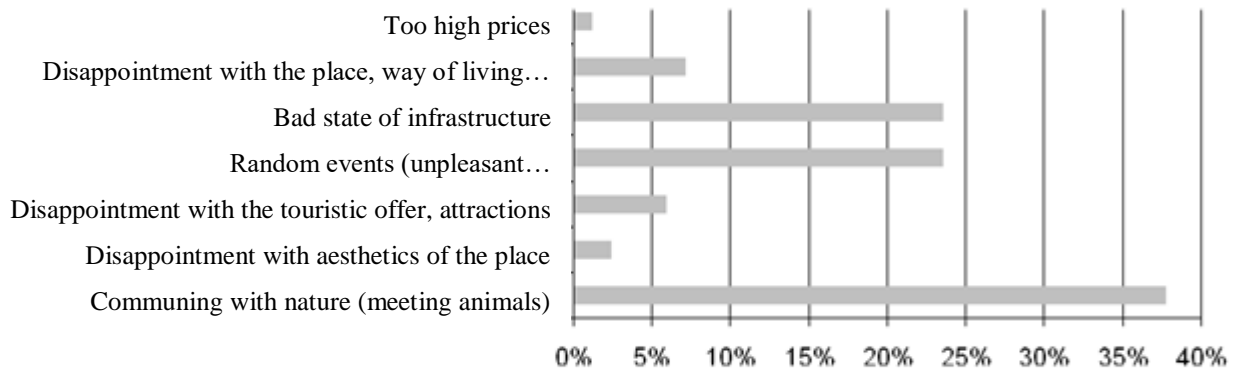


*Source: own work based on research.*

37% of the respondents considered the region's tourist offer as not diverse enough (figure 2). In their view, this offer can be supplemented by hot air balloon flights over the Bialowieza Forest, bungee jumping, by introduction of rides on funny bikes or penny farthings, as well as by organization of various workshops, handicraft, wood sculpture, painting or drawing in the form of cyclic, on-going competitions taking place during the week and completed with honours (e.g. in the afternoon on the selected site –so that the majority were able to watch). They point out the lack of recreational facilities such as places for team and individual games, playgrounds, including those for adults (such as in China). The feeling of satisfaction of 5% of the respondents was influenced by high quality and level of the offered services as well as good food (4%) (figure 1). It should also be noted that in the case of 68% of the respondents, in all the above mentioned categories determining obtaining satisfaction from the touristic stay, the occurrence of the positive unexpected events in relation to the expectations prior to departure to Bialowieza Forest micro-region was stated. Moreover, 9% of the respondents were surprised by the high quality of the catering offer (tasty food), but the feeling of satisfaction of only 4% of the respondents was influenced by it.

35% of respondents indicated dissatisfaction with the tourist stay. From among this group, 38% of the respondents included communing with nature in the factors influencing the discomfort of the felt satisfaction, including the unexpected unpleasant meeting with a wild animal, excessive nuisance of mosquitoes (figure 3).

*Figure 3 Events affecting the perception of discomfort and negative emotions of tourist stay in Bialowieza Forest micro-region*



*Source: own work based on research.*

From among this group, 44% of the respondents are determined to re-visit, 38% is undecided, and 19% declares reluctance to re-visit. Moreover, from along this group 28% is not fully satisfied with the touristic stay, whereas 9% is not satisfied. It is also worth mentioning that the evaluation of the quality of tourist infrastructure (hotel, catering, recreation) and the quality of the tourist services staff does not differ from the average ratings of all respondents, which allows to draw the conclusion that this factor (unexpected contact with wild animals and nuisance of mosquitoes) significantly reduces the attractiveness of the tourist area. Random event of the type: accident, unexpected event with people, rainy weather, low temperatures and strong wind caused the feeling of discomfort in 24% of the respondents (picture 4). Most of these people (82%) point out the small and not very diverse tourist offer (most probably in times of bad weather they sought alternative forms of recreation). Their low assessment in this category indicates the lack of alternative forms of spending free time apart from being outside. 50% of the respondents from this group is not determined to come again, and 6% will not re-visit. Poor quality of road infrastructure is also an important factor of discomfort of 24% of the respondents. The obtained research shows that 65% of these respondents hesitate about re-visiting this region even though they declared their satisfaction with the touristic stay, and the quality assessment of tourist infrastructure and services do not differ from the average ratings of all the respondents (figure 3). The discomfort is also affected to a much lesser extent by: disappointment with the place, style of life of the locals and their attitude (4%), disappointment with the touristic offer and attractions (3%), disappointment with the aesthetics of the place (1%) and too high prices (figure 3). The analysis of indicators of felt satisfaction with the tourist stay and assessment of diversity of tourist offer shows a significant relationship. 35% of the respondents pointed out the negative factors affecting the discomfort of the stay and 89% of those respondents estimate the tourist offer of the tourist reception to be low. This means that the remarks regarding the poorly differentiated recreational infrastructure significantly influence other areas of perceiving the touristic attractiveness. Minimizing the impact of this factor may take place through an increase of diversity of recreational infrastructure and organized recreational offer.

## 6. CONCLUSIONS AND PROPOSALS

Examination of the analysis of the impact of the obtained satisfaction on the touristic attractiveness of the forest areas enables to formulate conclusions. The touristic attractiveness of the forest areas are affected by tangible and intangible resources, such as those resulting from the ways the individual perceives complex of features and components creating space (they can be described as "a climate or an atmosphere of the place") arising from the concentration of certain physical resources (e.g. beauty of the landscape) and typically intangible resources embedded in human capital (interpersonal contacts, including professionalism of the touristic service as well as the attitude of the local population to tourists). The key resource influencing the motifs for the touristic trip to forest areas are the natural resources; they determine the attractiveness of the place, which also was confirmed by results of other researchers [Chang-Fei et al. 2010, Referowska – Chodak 2010]. An important factor affecting the attractiveness of the tourist forest areas and the feeling of satisfaction from the touristic stay is the impact of natural resources on human senses. Natural resources, diverse arrangement of ecosystems, complex of colours and smells influence the human senses and it results in perceiving this resource in terms of beauty, feeling of peace and quiet, which is also confirmed by Martin's research [Martin 2008]. However, from the point of view of a tourist the discomfort factor caused by unexpected contact with wild animals or excessive amount of mosquitoes is important. Moreover, important factors in perceiving the area in terms of attractiveness are intangible factors such as social contacts, making new acquaintances and friendships. As the research has shown, for a small group of tourists the communicative accessibility influences touristic attractiveness, which was confirmed by the conducted research [Chang-Fei et al. 2010]. The obtained research shows that poor quality of road infrastructure can reduce the tourism attractiveness. In his research, Prideaux [2000] proved that there is a possibility that they may seek alternative places for recreation, which has also been confirmed in this study. It should be noted that there were no distance associations between the place of residence and the place of rest and the discomfort felt by the poor condition of roads. Equally important factors influencing the discomfort of the rest are random events, such as an accident, an unpleasant meeting, rain or low temperatures and windy conditions. Minimization of these factors should take place as a result of extension of an organized offer of the region and growth of the diverse recreational facilities. Supporting resources determining the touristic attractiveness of the area lie in an offer associated with the possibility of realization of the cognitive objectives; next to the above mentioned natural resources these are unique historical and cultural entities as well as interesting organized cultural events. Although the studies conducted by Chang-Fei et al. [2010] were considered to be an enriching experience of visitors, their existence is not absolutely necessary, but the results of the conducted studies, particularly in the area of cultural objects, put them on par with the accessibility of communication. This high position results from their uniqueness in the scale of the country and the preserved diverse regional nature of the entities. Thus, it can be assumed that in the natural areas, tourists' experience is significantly enriched by the cultural facilities, but only the ones of a special unique nature. The high quality of tourist services staff and positive attitude of the local population as well as the high-quality food, including regional cuisine, is hardly a factor that is affecting the touristic attractiveness. In the case of research conducted by Chang-Fei et al. [2010], the quality of accommodation and food is an important determinant of touristic attractiveness. The researchers explain this with the fact of its low quality. In the case of the researched area, both the diversity of entities, their standard and the quality of service in the facilities is on a high and the highest level of the five stages of assessment. Moreover, the provisions of law do not allow to use the facilities which are damaged, not meeting both health and safety standards. It is therefore assumed that in Poland, this resource is treated as a mandatory standard, associated with handling the tourist movement and it makes little impact on touristic attractiveness.



The experience of positive emotions associated with rest, relaxation or feeling of extreme emotions, and thus enhancement of the touristic attractiveness of the areas, is affected by the offer of organized social events and activities (such as: fire with roasting a wild boar, disco), the offer of both active and passive recreation (such as: balloon flight, penny farthing rides, workshops), the offer of varied recreational facilities for individual recreation (such as: playgrounds, sports facilities, tennis courts). It can significantly mitigate the impact of negative emotions associated with the factors of discomfort caused by independent factors (weather, lack of company).

## **7. SUMMARY**

Research of the touristic attractiveness of the valuable natural areas is an answer to the tourists' growing interest in this area and the need to develop standards and guidelines for the managing sector to design a comprehensive strategy for tourism development. This is necessary from the point of view of preserving the high quality of the natural resources and, at the same time, the increase in the profitability of the tourism sector, including through the creation of new jobs. The first reason is attracting diverse touristic segments with a touristic offer (currently the dominant segment of tourists are practicing active tourism, but research shows that these areas are visited by a diverse touristic segment, although their share is still low [Panfiluk 2015]. The second factor is the need to extend the touristic stay and an increase of tourists' expenses.

Admittedly, the research is carried out on a representative group of tourists, however, limited to one area; therefore, for the conclusions to be generalized to all areas of valuable nature, it is necessary to carry out research on a number of valuable natural areas, including outside the country. Moreover, the factors of touristic attractiveness can be researched with the help of an indicator of the satisfaction obtained from the touristic stay (as it was done in this work), but also with any other indicator of the level of tourist's satisfaction with the stay or through the creation of the tourist ranking of factors affecting touristic attractiveness, as it was done in regard to the supply research by Chang-Fei et al. These examples only confirm the breadth of tools that can be applied when assessing the touristic attractiveness of the reception area from the perspective of the demand. Further research in this direction should lead to a detailed comparison of the factors of satisfaction with the tourist stay and the loyalty declaration, which would determine the standards of the quality of elements of the touristic attractiveness and would boost the enterprise and management sector.

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## INNOVATION IN THE SHOPPING PROCESS IN THE HYPERMARKET

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### **ABSTRACT**

*In many hypermarkets the shopping process is unattractive, has a low level of innovation, and takes a lot of time, which negatively affects the customers, causing further barriers in the development of hypermarkets. In addition, the continuous growth of the Internet and low delivery costs cause an increase in the number of buyers in online stores. Hypermarket managers can make shopping more attractive by introducing innovations related to the non-queueing at cash desk, non-cash forms of payment, by means of analysis of the traffic in a shop using a so-called heat maps. The pace of innovation will depend on the safety of these purchases, the openness to customer innovation, the simplicity of using new tools and technologies, and the low cost of bringing them to the market. This article presents the results of a pilot study conducted among young people for two innovative shopping systems Amazon GO and Scan & GO.*

**Keywords:** *ICT, innovation, hypermarket, shopping process*

### **1. INTRODUCTION**

The development of ICT which took place in the second half of the twentieth century contributed to a dynamic increase in online commerce over the last ten years (Food Retail Industry Insight – 2016, p. 4, Retail Industry, p. 28-31). It covers a wide range of consumer goods such as books, CDs, perfume, clothing, household appliances, electronics, cleaning products as well as furniture, building materials and cars. Traditional retailing, has witnessed changes in consumer behavior, increasing level of competitiveness, and therefore has developed new forms of sales (Grewal p.15). That is why it takes action in the form of diversification of sales channels, i.a. via the Internet or grocery delivery services and by introducing innovations to traditional shops (Food Retail Industry Insights – 2016, p3). Finally we can cite a prediction made by Accenture: The retail and consumer goods industries will change more in the next 10 years than they have over the past 40. One primary force is responsible—digitalization. (Donnelly, Wright, 2017 p.2) From a macro perspective, retail is still one of the main sectors of the economy, offering many work places. Shopping is one of the main items in household spending. In Poland, excluding catering establishments, total sales in retail outlets increased from 416,1 trillion PLN to 710,3 trillion PLN in the period of 2005 – 2016 which means that there was an increase per capita from 11 353 PLN to 19 372 PLN (Concise Statistical Yearbook of Poland, 2017, pp. 175). The same trends can be observed in other countries in the world, for example in the UK, consumers spent £388 billion at current prices non-seasonally adjusted in 2016 and £315 billion in 2008, so there has been an increase of 23,17% over the last 8 years (Retail sales, Great Britain: October 2017 pp. 59). A further analysis shows that 1 pound spent is allocated in the retail sector online and in shops as follows:

- 40p in food stores
- 42p in non-food stores
- 9p on automatic fule
- 9p in other types of retailes, such as market stores or mail order catalogues. (Ch. Rhodes & P. Brien, 2017, pp. 3)

Retail industry generates the £192 billion to GDP (11,4% of the total) and offers employment 4,6 million in Great Britain in 2015, 15.7% of the total (Ch. Rhodes & P. Brien, 2017, pp. 4-5). In the EU-28 countries for stationary retail is forecast a solid turnover growth of 1,4% (nominal) and without Great Britain retail turnover will grow by 2,2 % (European Retail in 2017, p. 8). In the world, the biggest retail markets are the US and China. For example in 2005 the US total retail sales was 3 686,7 Bil. US \$ (Seasonally Adjusted Sales) and reached 4 849,4 Bil US \$ in 2016, which means increase of 31,5%. (U.S. CENSUS BUREAU). Employment in the sector was in October 15,8 million workers (Current Employment Statistics Highlands, 2017, p. 8). Transformation of retailing connected with rapid process of market concentration had created retailers to the top list of largest national firms in US (Walmart), UK (Tesco), France (Carrefour) or Germany (Aldi, Metro). (Drake-Brockman, 2013. p. 4). The above mentioned data show that retail sector is important not only for sellers but also for the government, however, the retail market is highly competitive, so they fight about the consumer spending. For most consumers, the price plays the key role – 59,3% (Total Retail 2017. Report on UK findings, pp. 11), so all sellers want to minimise the cost of the process of delivery, selling and after selling services. A better price will attract new consumers, it was described as the efficient value chain. (Global Retail Trends Tom Rubel TNS, 2017) New consumers mean a bigger share in the market, what will drive the growth of margin. New investment in technology, based on innovation will ensure to set up a better price in long perspective and /or increase a quality of services.

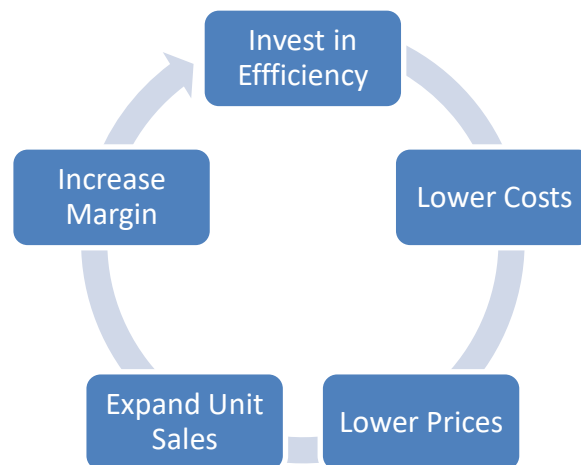


Chart 1: Global Retail Trends TNS (Rubel, p. 18)

## 2. SUMMARY OF LITERATURE THEMES

The research review was based on the scientific papers, patents and analyses conducted by commercial or governmental organizations. In scientific literature, the following terms are used: intelligent shopping system, intelligent shopping process. In the consulted works, the majority of them was used for the first time in 80th last century. Transformation of retailing developed also other names like Modern Retailing or Organised Retailing (Drake-Brockman, 2013. p. 6). In the area of retail, the number of patents is enormous, begins in XX century. We could consider to conduct narrow patent analyses in some technologies, which we can meet at store like: RFID, barcodes, blockchain technology, on-line and electronic payment, imaging of objects and people, basket or cart weight, however for purpose of this paper we just only indicate some of them, like:

- Self-service shop, US3836755, 12.02.1973,
- Check-out terminal US3949194 20.03.1974,
- Mobile automated shopping system, US4071740, 26.05.1976,

- Method and apparatus for customer performed article scanning in self-service shopping US4929819 12.12.1988,
- POS system with customer terminal, US5734839 31.05.1994,
- Point of sale device for use with a shopping cart, US20120296751 A1, 25.01.20110
- Method and system for providing shopping assistance using RFID-tagged items US20020170961 17.05.2001,
- Shopping process including monitored shopping cart basket weight, US20140214596, 29.01.2013

Lastly, there is a tendency to focus on retail for research, innovation in the retail industry and the future of retail. One examined carefully the reports prepared by international widely known organizations, for example Accenture/World Economic Forum, Boston Consulting Group, Comarch/TNS Kantor, IBM, KPMG, PwC.

*Table 1: Key enablers and time for full readiness of disruptive technologies (Accenture/World Economic Forum, Shaping the Future of Retail to Consumer Industries, 2017, p. 11-12)*

Technology	Sell	Time to full readiness	Key enablers for full readiness
Internet of Things	Automated ordering connected devices	2-5 years	Advanced capability to synthesize the data across the organization Global standards for data collection Advance in data security about consumer
Autonomous Vehicles/Drones	Last-mile delivery	6 – 10 years	Technology needs to mature in aspects e.g. battery drons, heavier items
Artificial Intelligence/Machine Learning	Proedictice recommendations	2-5 years	Advanced capability to synthesize the data across the organization Advance in data security about consumer
Robotics	Robotic picking, automated sales assistants	2-5 years	Advanced features needed (e.g. dexterity and battery life) Developoment of smarter bots
Digital Traceability	Merchandise tracking; product authenticity mapping	2-5 years	Advanced capability around predictive and preventve analytics Common digital language between the stakeholders
3D Printing	In-store product printing; real time manufacturing	6-10 years	Advanced features needed to improve the speed, multi-material capabilities
Augmented / Virtual Reality	Virtual retail locations; VR demos	2-5 years	Component pats (e.g. chips) must be affordable to sell AV/VR devices
Blockchain	Online wallet	6-10 years	Ability to perform high-volume in a secure way Regulatory frameworks for payment

The other research conducted by Comarch and Kantar TNS in six european countries: Great Britain, Germany, Italy, Netherdlans, Poland and Switzerland, create a new vision for digital services and payment options in 2030. The analysis show, that the customer are open for the innovation in shopping process, they even predict a change in the number of physical stores, which will go dow.

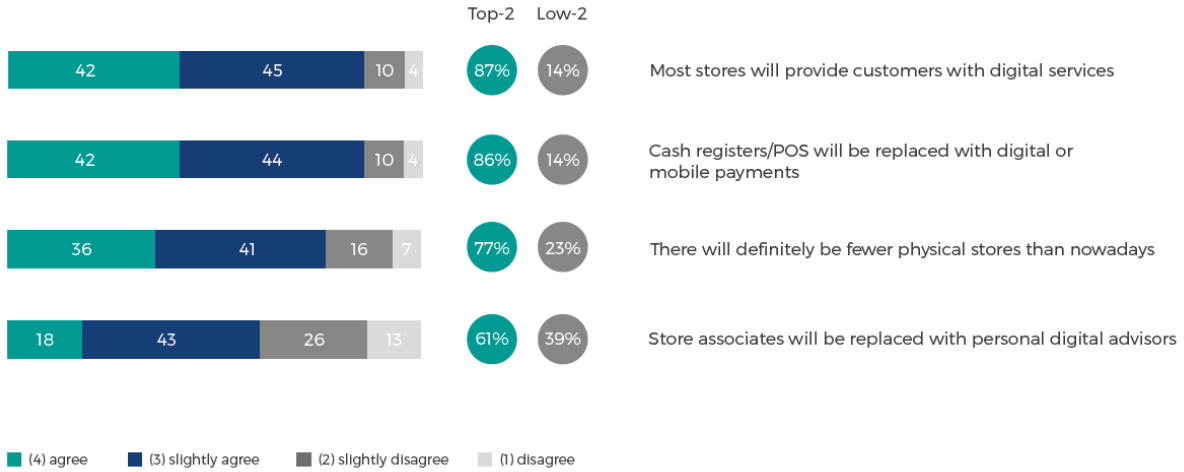


Chart 2: Vision of shopping in 2030  
 (Future of shopping. Lates trends in retail today and 2030, p.7)

Observation across all age groups, shows a stabile vision of shopping in 2030 for groups aged of: 55-65, 45-54, 35-44 and 25-34, which are more opposite to the last aged group: 18-24, except of first statement: most stores will provide customers with digital services, where the respondents in aged of 35-44 are more agree than the youngest group.

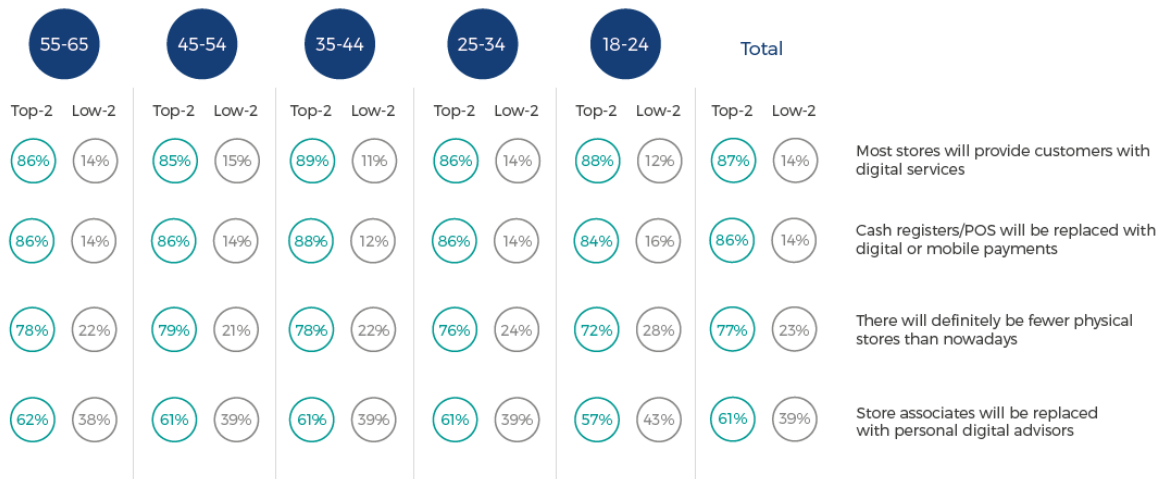


Chart 3: Vision of shopping in 2030 across all age groups  
 (Future of shopping. Lates trends in retail today and 2030, p. 8)

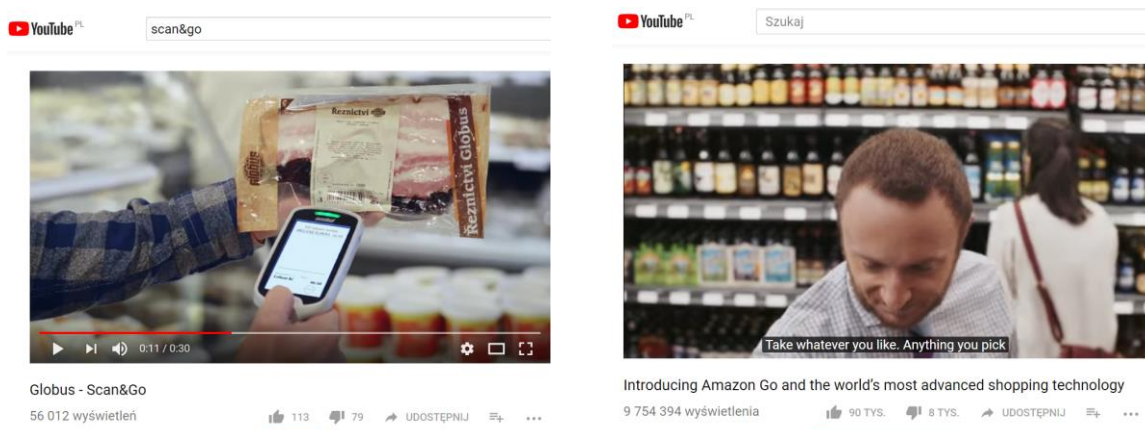
The Boston Consulting Group indicate especially for the emerging countries the following sets of capabilities: omni-channel (includes digital marketing), BigData and analytics, agile IT and supply chain. (Singhi, Mall, Namit, 2016. p. 49) Proces of shopping in traditional stores (omnichannel retailer) consist of five steps (Singhi, Mall, Namit, 2016. p. 30):

- 1) research,
- 2) locate,
- 3) shop,
- 4) deliver,
- 5) post-purchase.

In the future smart shopping system could use one let say cart, which cover all steps based on several different innovations and could be affordable for the shopper as well as managers of the supermarkets.

### 3. METHODOLOGY

The present approach is an attempt to further open a field of enquiry for the assessment of the benefits and risk of innovation for two systems: Scan&Go, which is on the market in many countries in the world and Amazon Go which has been in the testing stage in one shop in the US in Seattle (Bishop, 2016). The data were collected among eight teams of three – four young consumers at the age of 21 – 23, who study Management and Engineering Services at Bialystok University of Technology. Students have had no experience with the systems Scan&Go and Amazon Go, they based their predictions on watching promotional and instructional on-line video on You Tube in 2017.



*Chart 4: Innovation shopping technology in retail: Scan&Go and Amazon Go  
(www.youtube.com)*

The Scan & Go system automatically scans products at the time of purchase and allowed automatic payment at the end of the purchase without staying in the queue. A customer after crossing the gates in the store, registers and gets a scanner, which is put to a special panel before leaving the store. System Amazon Go is based on RFID technology, which detect items taking from the shelves by shoppers. Logged the items during shopping process and exiting a »transition area« by customer in the store eliminate the traditional check-out line, because the system senses charges the customers of their Amazon account (Bishop, 2016). (Bishop, 2016).

### 4. RESULTS AND DISCUSSIONS

Before the groups of students have started their work, the main researcher has been conducted a discussion about economic situation and technology level of main innovation in retail industry.

Nowadays we can observe many market changes, which of course they have a different speed and strenght deped on country and time:

- time monetization,
- increase in wages (minimum wage, contract of employment),
- decline in unemployment,
- the advantage of leaving the market above the entrances,
- greater economic activity,
- high frequency of purchases (for example in Poland) - average higher than in other countries,

- increasing expectations to the level and quality of service,
- higher technology saturation - a high percentage of electronic payments.

It turns out, that we find some social problems during shopping: firstly, queues in the shop (especially in rush hour), secondly the low attractiveness of the form of shopping in grocery stores, hipermarkets or supermarkets and lastly difficulties to identify product locations and product values with parameters (eg. small font on packaging).

The eight groups of young students predict that Amazon Go will appear in the market in Poland from 10 to 20 years, depends of group. They realise that the project has a big risk because of:

- reduction of sellers in shops, hacking attacks
- problems in handling
- increase in product theft
- problems in handling, especially by older people
- lack of openness to innovation in the public
- risk of personal data loss

With reference to the Scan&Go system they are more optimistic, they see less risk to the buyer, but they emphasize the change in the hiring structure in the stores. About the time of implementation this system they expect that people can use in nearest years, the full access and commonly will be in ten years. Nonlinearity in innovation is a clue for the market, in side of retailers, delivering technologies or even customers.

## 5. CONCLUSION

Innovations in the perspective of the young consumer, who are more familiar with the IT technology could add new value and prepare a better strategy for the right time of implementing innovation in retail as other activities like marketing and price. Preliminary pilot studies indicate that consumers are open to innovations in retail chains that will streamline the purchase process. There are no security risks to buying and sharing your shopping history

The results of this investigation constitute a basis which can be further developed so that it could be implemented in further research studies, in particular, in the case of respondents with different characteristics: age, occupation, experience with innovation in the shopping process. Such an approach will decrease the limitation of the conducted research study.

**ACKNOWLEDGMENT:** *This research was supported by Bialystok University of Technology.*

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## **SOME REFLECTIONS ON THE DUALITY OF THE EXECUTIVE UNDER POLISH CONSTITUTION OF 1997: CRITICAL ANALYSIS**

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### **ABSTRACT**

*The Author of the article will focus on analyzing constitutional provisions dealing with duality of Polish executive. As it turned out after 20 years of functioning of the new Constitution, the whole idea of cooperation between President and Council of Ministers, being a result of political compromise reached in the mid 90's and constitutionalized, has failed under the burden of incorrectly constructed constitutional provisions. The appropriate judgments of Polish Constitutional Tribunal will also be widely discussed to illustrate seriousness of the problem of lack of coherence in the constitutional regulations. The Author will also come up with some ideas of amending constitutional provisions dealing with position of President of the Republic, to solve the problem and repair the system.*

**Key words:** *Constitutional law, President, Council of Ministers, division of power.*

### **1. INTRODUCTION**

Beginnings of Polish constitutional traditions date back to XIV century and creation of nobles' democracy. (B. Banaszak (2005). Outline of Polish Constitutional Law. p. 11-14). The process of evolution of early constitutions, conditioned by historical events affected the relations between the king (executive) and parliament (nobles). In this configuration always prevailed until today. Therefore Poland has always had weak executive power and much stronger parliament. After the fall of communism in 1989, the new Polish constitution was finally adopted by the National Assembly on April 2, 1997 and ratified by referendum on May 25. The Constitution of 1997 adopted parliamentary system of government and splitted the executive power between council of ministers and president, the latter directly elected by the sovereign.

### **2. PRESIDENT'S CONSTITUTIONAL POSITION AND COMPETENCES**

The constitutional concept of presidential position had been shaped in the mid 90` being the result of political configuration of that era. At that time all options had been on the table and implementation of presidential system had been seriously considered (L. Garlicki (2012). *Polskie prawo konstytucyjne. Zarys wykładu.* Warsaw p. 259-260), (M. Grzybowski (2010). *Pozycja ustrojowa prezydenta RP w dobie integracji europejskiej*, Pip). Fortunately common sense prevailed, and ideas of strengthening executive, by implementation of pure presidentialism, supported by right part of political scene had been abandoned. Such ideas are contrary to Polish parliamentary traditions and would pose a dangerous example for the future, as the history proves that presidential form of government, almost without exception, had always failed turning the country into authoritarianism. The only exception from that general rule is USA, probably due to the fact, that strong presidential power is balanced by federal form of government of the country with huge territory. On the other hand, in Europe consisting of rather small states, such accumulation of power in a hand of one institution (president) would end up in breaking constitutional balance, which is always crucial to support democratic form of government. In other words, Poland is an example of a state where implementation of presidentialism would fail, changing the system from democratic towards authoritarian (more on presidential form of government: G. Sartori (1997), *Comparative Constitutional Engineering*, London).

Constitution of 1997 defines position of the president in the art. 10(2), which states that executive power shall be vested in the President of the Republic of Poland and the Council of Ministers (Polish Constitutional Law. The Constitution and selected statutory materials, Warsaw 2009, p. 23). According to Garlicki constitutional position of the President is determined by six features (L. Garlicki (2012), *Polskie prawo konstytucyjne*. Warszawa 2012, p. 260):

- 1) Duality of the executive gives a way to the Council of Ministers in conducting the affairs of the State not reserved to other State organs or local government (art. 146 (2)). This article diminishes role of the president, accentuating at the same time parliamentary form of government
- 2) The Constitution ensures, that President steps in case of parliamentary crises to stabilize the political situation
- 3) Being elected by the sovereign, the President gets very strong mandate to represent and materialize the will of the Nation regarding the potential conflicts with parliament.
- 4) According to art. 127 (2) of the Constitution, President of the Republic shall be elected for a 5-year term of office and may be reelected only for one more term.
- 5) Independence of the President from other centres of power is assured by art. 145 of the Constitution, which limits its responsibility to constitutional one. On the other hand official acts of the President shall require, for their validity, the signature of the Prime Minister who, by such signature, accepts responsibility thereof to the Sejm (art. 144 (2) of the Constitution).
- 6) Independence of the President is also materialized in principle of incompatibilitas, according to art. 132 of the Constitution the President of the Republic shall hold no other offices nor discharge any public functions, with the exception of those connected with the duties of his office.

Regarding the competences of the President, crucial role plays art. 126 of the Constitution, which constitutes that, President of the Republic of Poland shall be the supreme representative of the Republic of Poland and the guarantor of the continuity of State authority (B. Banaszak (2009). *Konstytucja Rzeczypospolitej Polskiej. Komentarz*. C.H Beck, Warszawa, p. 643-646). President also ensure observance of the Constitution, safeguard the sovereignty and security of the State as well as the inviolability and integrity of its territory. This article describes the most important tasks of the President, although more about real presidential power says art. 144 of the Constitution, according to which President, exercising his constitutional and statutory authority, shall issue Official Acts. These acts shall require, for their validity, the signature of the Prime Minister who, by such signature, accepts responsibility therefor to the Sejm, except (P. Sarnecki (2008), *Prawo konstytucyjne RP*. Warszawa, p. 349).

- 1) Proclaiming elections to the Sejm and to the Senate
- 2) Summoning the first sitting of a newly elected Sejm and Senate
- 3) Shortening of the term of office of the Sejm in the instances specified in the Constitution
- 4) Introducing legislation
- 5) Proclaiming the holding of a nationwide referendum
- 6) Signing or refusing to sign a bill
- 7) Ordering the promulgation of a statute or an international agreement in the Journal of Laws of the Republic of Poland (*Dziennik Ustaw*)
- 8) Delivering a Message to the Sejm, to the Senate or to the National Assembly
- 9) Making a referral to the Constitutional Tribunal
- 10) Requesting the Supreme Chamber of Control to carry out an audit
- 11) Nominating and appointing the Prime Minister

- 12) Accepting resignation of the Council of Ministers and obliging it to temporarily continue with its duties
- 13) Applying to the Sejm to bring a member of the Council of Ministers to responsibility before the Tribunal of State
- 14) Dismissing a minister in whom the Sejm has passed a vote of no confidence
- 15) Convening the Cabinet Council
- 16) Conferring orders and decorations
- 17) Appointing judges
- 18) Exercising the power of pardon
- 19) Granting Polish citizenship and giving consent for renunciation of Polish citizenship
- 20) Appointing the First President of the Supreme Court
- 21) Appointing the President and Vice-President of the Constitutional Tribunal
- 22) Appointing the President of the Supreme Administrative Court
- 23) Appointing the presidents of the Supreme Court and vice-presidents of the Supreme Administrative Court
- 24) Requesting the Sejm to appoint the President of the National Bank of Poland
- 25) Appointing the members of the Council for Monetary Policy
- 26) Appointing and dismissing members of the National Security Council
- 27) Appointing members of the National Council of Radio Broadcasting and Television
- 28) Establishing the statue of the Chancellery of the President of the Republic and appointing or dismissing the Chief of the Chancellery of the President of the Republic
- 29) Issuing orders in accordance with the principles specified in Article 93
- 30) Resigning from the office of President of the Republic

Above considerations constitute a brief description of the legal and political position of the President.

### **3. COUNCIL OF MINISTERS**

The formulation of the Council of Ministers is precisely described in art. 154 of Constitution. The first step belongs to President who nominates a Prime Minister will propose the composition of a Council of Ministers. The President will, within 14 days of the first sitting of the Sejm or acceptance of the resignation of the previous Council of Ministers, appoint a Prime Minister together with other members of a Council of Ministers and accept the oaths of office of members of such newly appointed Council of Ministers. After that, according to art. 154 (2) of Constitution, Prime Minister will, within 14 days following the day of his appointment by the President of the Republic, submit a programme of activity of the Council of Ministers to the Sejm, together with a motion requiring a vote of confidence. The Sejm will pass such vote of confidence by an absolute majority of votes in the presence of at least half of the statutory number of Deputies (M. Grzybowski (2008). Prawo konstytucyjne. Białystok. p. 265). In the event that Council of Ministers has not been appointed or has failed to obtain a vote of confidence, as described above, the Sejm, within 14 days of the end of the time periods specified above, will choose a Prime Minister as well as members of the Council of Ministers as proposed by him, by an absolute majority of votes in the presence of at least half of the statutory number of Deputies. The President will appoint the Council of Ministers so chosen and accept the oaths of office of its members. In the event that, a Council of Ministers has not been appointed, as stated above, the role of the President significantly increases. According to art. 155 (1) of the Constitution, President, within a period of 14 days, appoint a Prime Minister and, on his application, other members of the Council of Ministers and accept the oaths of service of them. The Sejm, within 14 days following the appointment of the Council of Ministers by the President of the Republic, will hold, in the presence of at least half of the statutory number of

Deputies, a vote of confidence thereto. In the event that vote of confidence has not been granted to the Council of Ministers, the President of the Republic will shorten the term of office of the Sejm and orders elections to be held. Regarding the competences of the Council of Ministers, its constitutional position in the executive explains art.146 of the Constitution, stating that the Council of Ministers will conduct the internal affairs and foreign policy of the state. What is important, the Council of Ministers conducts the affairs of the State not reserved to other State organs or local government (art. 146 (2) of the Constitution). It means, that all the competences not directly reserved for other state organs, belong to the Council of Ministers. The art. 146 (4) specify some of them:

- 1) Ensuring the implementation of statutes
- 2) Issue regulations coordinate and supervise the work of organs of State administration
- 3) Protect the interests of the State Treasury
- 4) Adopt a draft state budget
- 5) Supervise the implementation of the state budget and pass a resolution on the closing of the state`s accounts and report on the implementation of the budget
- 6) Ensure the external security of the state
- 7) Exercise general control in the field of relations with other states and international organizations
- 8) Conclude international agreements requiring ratification as well as accept and renounce other international agreements
- 9) Exercise general control in the field of national defence and annually specify the number of citizens who are required to perform active military service
- 10) Determine the organization and the manner of its own work

#### **4. OVERLAPPING COMPETENCES BETWEEN THE PRESIDENT AND THE COUNCIL OF MINISTERS**

The constitutional regulations dealing with division of power between President and Council of Ministers are not free from inconsistencies, unfortunately. As stated above, all competences not precisely reserved for other organs, belong to the Council of Ministers. On the other hand Constitution ensures in art. 133 (3), that President will cooperate with the Prime Minister and the appropriate minister in respect of foreign policy. This article makes sense, because the President, as a head of state directly elected by the sovereign should affect the policy of Council of Ministers. In a real life very unprecise constitutional regulations constitute a source of potential political conflict, especially in times of "cohabitation", which are always difficult. It is clear, that such unprecise constitutional construction regulating conducting foreign affairs, can trigger constitutional conflict (J. Jaskiernia (2010). Współdziałanie prezydenta i Rady Ministrów, Pip). In fact, the first serious, political and legal conflict (of constitutional rank) broke out on 2008, regarding dispute over authority between the President and the Prime Minister as to which central constitutional organ of the state is authorized to represent the Republic of Poland at the session of the European Council (Decision of the Constitutional Tribunal of 20 May 2009, Kpt 2/08). In this decision, Polish Constitutional Court found that, President, as the supreme representative of the Republic, may – under article 126 (1) of the Constitution – decide to participate in a particular session of the European Council, if he finds it useful for the exercise of the duties of the President, specified in the art. 126(2) of the Constitution. What it means, is that two representatives of the executive can participate in the same session. In a real life, such interpretation of the Constitutional Court, reveal all the weaknesses of constitutional regulations dealing with functioning of the executive. Translating findings of the Constitutional Court into political language, polish citizens had witnessed very embarrassing dispute between the President and Prime Minister during the session of the European Council, known as the "chair battle". Furthermore, according to Tribunal, the

participation of the President in a given session of the European Council requires cooperation of the President with the Prime Minister and the competent minister, according to the principles set out in the art. 133 (3) of the Constitution. The goal of the cooperation is to ensure uniformity of actions taken on behalf of the Republic of Poland in the relations with the European Union and its institutions. Moreover, according to Tribunal's decision, the Council of Ministers, under art. 146 (1), art. 146 (2) and art. 146 (4) (9) of the Constitution, determines the stance of the Republic of Poland to be presented at a given session of the European Council. The Prime Minister (who presides over the Council of Ministers) represents the Republic of Poland at the sessions of the European Council and presents the agreed stance. But what if "the agreed stance" can not be worked out due to political dispute between the two parties? What is the role of the President then, if foreign affairs are conducted by Council of Ministers? Duality of position of Polish representatives during the Session of the European Council, confusing European partners? On the level of very abstract constitutional regulations, such solution, mentioned above, may look good on paper, but after translating legal, constitutional language into a political one, there is no doubt, that constitutional regulations are far from perfect, rather triggering than appeasing potential political conflicts. Carrying on its considerations, Constitutional Court finds, that cooperation of the President with the Prime Minister and the competent minister enables the President to refer – in matters related to the exercise of his duties specified in art. 126 (2) of the Constitution – to the stance of the Republic of Poland determined by the Council of Ministers. The cooperation also makes it possible to specify the extent and manner of the intended participation of the President in a session of the European Council. That subordination of the President, in case of political conflict, to the position of the Council of Ministers seems to be unlikely in practice, particularly after taking into account, that President is directly elected by the sovereign.

## 5. SUMMARY

Above considerations leaves no doubt, that regulations of Polish Constitution of 1997 in the field of executive power is far from perfection. In this way a political conditions of mid 90's, when provisions of Constitution had been taking shape, affect the application of Constitution today. In my opinion, the biggest error of Constitution lies in a form of election of President. The President, having the strong mandate directly from the Nation on the one hand, not taking political responsibility for his actions on the other hand, can effectively paralyze the work of Council of Ministers. The remedy for this inconsistency, in my opinion, is to replace the sovereign with the parliament.

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## EXISTING LEGAL FRAMEWORK IN CROATIAN LAW AND INCONSISTENT CASE LAW (COURT PRACTICE) AS INTERFERENCE TO AN INVESTMENT PROCESS

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### ABSTRACT

*In this paper, the authors have decided to analyze an aspect of legal uncertainty as interference to an investment process. It is the aspect that deals with the negative effects of the existing legal framework (which is constantly changing, resulting in the fact that laws with only few amendments are very rare, which does not really respect terminology nor the essence of particular constitutional provisions, in which consolidated text of a law is a rarity even if it has been changed more than ten times, in which there are cases of legal amendment although the law has not been applied yet, cases in which the Constitutional court repeals the entire law which has not come into force yet, numerous cases where entire parts of law are changed by other laws thus creating a false image of what is, or is not in force, cases in which the law in its text as an existing court appoints the one that did not exist at the time of appointment, nor in the years thereafter, which in its text stipulates the prohibition of court protection even though it is contrary to the explicit provision of the Constitution of the Republic of Croatia ....). However, it is also about case law (including administrative court practice) that is not only mutually uncoordinated but also very unpredictable. Both have the same effect on the legal certainty (and on the rule of law, because these are the two basic pillars of any legal state and two main goals of every country that wants to become legal) which is one of the preconditions for any investment interest. In one of the analyzed examples the amount of one million was charged for the construction which was later given up on, contrary not only to the law but also the case law.*

**Keywords:** *case law (court practice), legal certainty, legal framework, the rule of law*

### 1. INTRODUCTION

It has been claimed many times that Croatian legislation and court practice together form the Croatian legal framework. That legal framework can be both, very good and very bad, with all the transitional features between these two extremes, and the topic of this text is the effect of the legal framework on investment processes in several specific and current legal examples<sup>1</sup>. In

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<sup>1</sup> We have already written about the threats on the examples of the Criminal Code (Official Gazette 110/97, 27/98 - correction 50/00, 129/00, 51/01, 111/03, 190/03, 105/04, 84/05, 71/06, 110/07, 152/08 and 57/11 - hereinafter: CC 97 / or the Criminal Code 97), Law on Ownership and other Real Property Rights (Official Gazette 91/96), Act on Amendments to the Law on Sale of Apartments with Occupancy Right (Official Gazette 68 / 98), Decision of the Constitutional Court of the Republic of Croatia no.UI-58/97, UI-235/97, UI-237/97, UI-1053/97 and UI-1054/97 of 17 November 1999 (Official Gazette 137/99), Decision of the Court of the Republic of Croatia no. UI-1094/99 of 9 February 2000 (Official Gazette 22/00), Act on Amendments to the Law on Ownership and Other Real Property Rights (Official Gazette 37/00), Act on Amendments to the Law on Ownership and Other Real Property Rights (Official Gazette 114/01), Act on Amendments to the Law on Ownership and Other Real Property Rights (Official Gazette 141/06), Act on Amendments to the Law on Ownership and Other Real Property Rights (Official Gazette 146/08), the Act on Amendments to the Ownership and Other Real Rights Act (Official Gazette 38/09), Act on Amendments to the Law on Ownership and Other Real Property Rights (Official Gazette 153/09), Act on Amendments to the Law on Ownership and Other Real Property Rights(Official Gazette 143/12), Act on Amendments to the Law on Ownership and Other Real Property Rights (Official Gazette 152/14, 81/15, consolidated text: hereinafter: LO or the Law on Ownership), the Law on Amendments to the Law on Ownership and Other Real Rights And the Law on Ownership), Civil Obligations Act 35/05, 41/08.and 125/11., 78/15. (Hereinafter: COA or Civil Obligations Act), the Inheritance Act ("Official Gazette" 48/03, 163/03, 35/05 and

addition to the regulations that represent the legal framework in a narrow sense there is also a legal framework in a broader sense. This is the case when, in addition to the regulations (of all levels), we also consider the court practice, including the practice of the Croatian Constitutional Court, although this court is not a part of the Croatian judiciary, it is not a court in that classical sense of tripartite division of power into the legislative, executive and judicial, we can rather call it *sui generis* court. Although the Constitution of the Republic of Croatia<sup>2</sup> is very clear when in Article 119. appoints the Supreme Court as the highest court, it is the Constitutional Court that annuls the decisions of the Supreme Court, and not vice versa. What has been done so far about the legal framework in the Republic of Croatia is a history we cannot change, but we can and must learn from it to avoid repeating mistakes or omissions. In other words, yesterday's future is already present and tomorrow is already past and there is simply no time to lose. In a way, this is a very practical application of the old and universally known principle TIME IS MONEY, this time being applied to the legal framework. According to the nature of civil law, everyone who does not respect this clear obligation should generally be held responsible. In this paper we have presented several clear and particular examples of norms and all of them have a very negative connotation. The work itself is divided into several parts marked with Roman numerals I - IV. Part I is INTRODUCTION, the second part LEGAL SOURCES, the third ANALYSIS and the fourth and the last CONCLUSION.

## 2. LEGAL SOURCES

Just as with any other legal topic, the basic and the highest legal source in Croatian law is the Constitution of the Republic of Croatia<sup>3</sup>. Given the topics covered in this text, the meaning of legal source also have the Building Act<sup>4</sup>, the Noise Protection Act<sup>5</sup>, Law on state support for agriculture and rural development<sup>6</sup>, the Utilities Act<sup>7</sup> and the Convention for the Protection of Human Rights and Fundamental Freedoms<sup>8</sup>.

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127/13, 152/14, 33 /15 (hereinafter: IA or the Inheritance Act) and the Enforcement Act (Official Gazette 57/96, 29/99, 42/00, 173/03, 194/03, 151 / 04., 88/05., 121/05 and 67/08 - hereinafter: the EA96), the Enforcement Act (Official Gazette 139/10, 150/11, 154/11). 12/12, 70/12 and 80/12, hereinafter: the EA96). The Enforcement Act (Official Gazette 112/12 and 25/13, 93/14 – hereinafter: the EA96), but it is obvious that the list of critical points in Croatian legal framework is far longer and it needs to be addressed, and that is exactly what is being done in this text.

<sup>2</sup> The Constitution of the Republic of Croatia (Official Gazette 56/90, 135/97, 8/98 – consolidated text, 113/2000, 124/2000 - consolidated text, 28/2001, 41/2001 - consolidated text, 55/2001 - correction) and Amendment to the Constitution of the Republic of Croatia published in the Official Gazette 76/2010, 85/10. – consolidated text, Amendment to the Constitution of the Republic of Croatia (National Constitutional Initiative), Official Gazette 5/14 - Constitutional Court Decision No. SuP-O-1/2014 of 14 January 2014 (hereinafter: the Constitution or the Constitution of the Republic of Croatia ).

<sup>3</sup> The Constitution of the Republic of Croatia, Official Gazette 56/90, 135/97, 8/98 - consolidated text, 113/00, 124/00 - consolidated text, 28/01, 41/01 - consolidated text, 55/01, 76/10, 85/10 - consolidated text, 05/14 - Decision of the Constitutional Court No.: SuP-O-1/2014 of 14 January, 2014, by which Art. 62. of the Constitution was amended with paragraph 2 - further: the Constitution or the Constitution of the Republic of Croatia.

<sup>4</sup> The Building Act (Official Gazette 53/13, 20/17 - hereinafter: BA or the Building Act).

<sup>5</sup> The Noise Protection Act (Official Gazette 30/09, 55/13 and 153/13, 41/16,- hereinafter : NPA or The Noise Protection Act).

<sup>6</sup> Law on state support for agriculture and rural development (Official Gazette **83/09** – hereinafter: LSS or Law on state support).

<sup>7</sup> The Utilities Act (Official Gazette 36/95, 70/97, 128/99, 57/00, 129/00, 59/01, 26/03, consolidated text, 82/04, 178/04, 38/09, 79/09, 153/09, 49/11, 84/11, 90/11, 144/12, 94/13, 153/13, 147/14 - hereinafter: UA or the Utilities Act).

<sup>8</sup> The Convention for the Protection of Human Rights and Fundamental Freedoms (Official Gazette - International Treaties, 18/97, 6/99 - consolidated text, 8/99 - correction, 14/02, hereinafter: the Convention).



Court practice and legal science are very significant and indirect (*sui generis*)<sup>9</sup> sources of law. Court practice acts through the power of argument and argument of power, and legal science acts through the power of argument, which is particularly significant in a situation where court practice is still absent and legal regulation is poor or does not exist at all.

### 3. ANALYSIS

#### 3.1. General

No matter how much we discuss about it, there will always be one and the same constant - money, capital, investments - all three emerge when there is legal certainty and cannot exist if there is no legal certainty. There are many various definitions, but they all come down to the fact that legal certainty is the property of a situation, of a system in which (it is not irrelevant that it is a relatively long period of time without any significant changes in terms of complication) it is completely clear what are the legal effects of certain decisions or actions, regardless of who makes certain decisions about it<sup>10</sup>. In the section Croatian Laws we have presented a few unbelievable and unacceptable legal solutions. In a subsection Croatian legal practice, we have presented only one example, which is enough to dissuade almost everyone from investing in the Republic of Croatia.

#### 3.2. Croatian laws

##### 3.2.1. General

Since 1 July 2013. (The day when the Republic of Croatia gained full membership in the EU) Croatian laws have simultaneously been European laws and vice versa. However, European and Croatian legislative practice, unfortunately, still have little in common. This is not just because of the incredible number of laws passed in the mandate of a legislature<sup>11</sup>, but also because of their objectively low quality. The mentioned low quality is not a claim based on a scientific research, but it is clear from at least two facts. The first is that there are almost no laws (including those recently passed) without their novels, and there is a large number of laws that did not endure the verification of the Constitutional Court of the Republic of Croatia<sup>12</sup>. What is really worrying from the aspect of legal certainty is the fact that we are probably the only country in the world where, in the time of peace and without any extraordinary situation, laws are passed by urgent procedure<sup>13</sup>, and the exception is something that is a rule in every

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<sup>9</sup> See more on this, using the term of an indirect source of law in: Petar Klarić, Martin Vedriš, Civil Law, Official Gazette, Zagreb, 2008, p. 23.

<sup>10</sup> Legal Lexicon (Lexicographic Institute Miroslav Krleža, Zagreb, 2007) p. 1198-1199 gives the following definition: Legal certainty (Engl. legal certainty, Germ. Rechtssicherheit, French Securite juridique)- a state of deprivation of uncertainty about the content and implementation of legal norms that form a legal order or a part of it.

<sup>11</sup> For instance, (if we analyze only the summons in which the mandate was brought to end, i.e. a full four-year mandate), the VII summon had 820 laws passed on 20 sessions, of which 311 unanimously and 509 by the majority of votes. Obviously (taking into account the time when the Croatian Parliament did not sit by the decision of the Constitution), more than two sessions were held each month and more than 40 laws were passed on each. These are the numbers referring to passed laws, and there were also 39 rejected bills. Source: INFODOK service of the Croatian Parliament, [www.sabor.hr](http://www.sabor.hr).

<sup>12</sup> We mean abstract control of coherence with the Constitution. As an example we can refer to the Criminal Procedure Act (Official Gazette 152/08, 76/09, 80/11, 91/12, 143/12, 56/13 and 145 / 13. 152 / 14- hereinafter: CPA or the Criminal Procedure Act), in which a very extensive novel was completely abolished and Family Act of 2014. which was completely abolished (it is a very unusual decision in which owing to the attitude of the Constitutional Court the legislator allowed to simultaneously have two laws which regulate the same matter and promulgated that in the Report published in Official Gazette 83/14.)

<sup>13</sup> Thus, in the VII summon, of 820 laws 658 were passed by urgent procedure. Source: INFODOK service of the Croatian Parliament, [www.sabor.hr](http://www.sabor.hr).

other legal state - passing the law which is first plenary discussed at the so-called first reading and then (after a month or two) observations and suggestions are considered, consolidated and sent to the legislator on the so-called second reading after which (more often) the law is put to the vote, and less often to the third reading.

### 3.2.2. *The building act (article 132)*

The Building Act is a relatively new law with only one (but rather extensive) novel so far, which is at the same time commendable and surprising given the usual practice. However, this law also took a certain decision from the previous laws in this area, a decision that is only *prima facie* or *prima vista* understandable and acceptable. It reads as follows:

#### Decision on Temporary Suspension of Works

##### Article 132

(1) The representative body of the local self-government unit may, according to the previously obtained opinion of tourist community of the municipality or town, decide for certain types of buildings, in certain areas and determine the period in the next calendar year and the time when ground works and construction works cannot be performed .

(2) The decision referred to in paragraph 1 of this Article shall not apply to:

1. buildings or construction works which benefit the Republic of Croatia
2. removal of buildings based on a decision of building inspection or decision of another body of state authority
3. the construction of buildings or the execution of works in the year in which the decision came into force.

Before argumentation, it should be noted that building is the industry most affected by the global crisis that started in the Republic of Croatia somewhere in 2008 and lasted practically until 2016. At the same time it has a huge multiplication factor, because when building is active, all types of traffic, catering, tourism (who builds new accommodation capacity and improves the existing ones if not construction workers?) are active as well, but it also depends on climate conditions (It is well-known that during a big part of winter a series of construction works<sup>14</sup> is not possible or is extremely complicated). Building is not active at least 100 days a year because of weather conditions and when we take another 100 (and in some areas even 150) we realize that it is a world phenomenon where an activity that pays taxes 365 days a year works across the coast only 100- 150 days. When we add to this a huge workforce problem and working permits for foreign workers the picture is complete. Thus, the legislator has practically delegated (without any conditions) an exceptional authority to the local self-government units, the authority according to which each of them (and there are over 400 in the Republic of Croatia, many of which are in the coastal zone where this is mostly used with the population to 2000) may, according to its discretionary assessment (which does not have to be explained to anyone, let alone something else), prohibit the ground works and works on constructing the structure of a building for a limited time that must be "part of the year" and cannot be the whole year. In practice this is the measure used by coastal cities only, almost without exception, from the largest (Split) to the smallest and thus legally making construction activities impossible and unequal, and equality is guaranteed by the Constitution of the Republic of Croatia. We are talking about equality between the construction workers on one side and all the other entrepreneurs on the other side, but also about the equality of construction workers and

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<sup>14</sup> For example, those involving drying of material.

entrepreneurs in tourism on the other. It is about favoring one (tourist) branch at the expense of another (building) in the state where almost everywhere (the exception with the coast is Istria) the real season is limited to 60 or even less days, and the content of decisions of municipalities and cities in the implementation of the quoted Act is at the same time somewhat different (in terms of areas, periods and exceptions) and always completely non-argumentative. For example, in Split, the prohibition period is from 15 June to 1 September, but not in all parts of the city, the city of Hvar from 15 May to 15 October (as well as Omiš for full five months), the entire area of the city of Hvar, Bol from 01.05.-30.09. (as well as in Omiš and Hvar for full five months) and every Sunday and during holidays all year round - the whole area of Bol, ... Some decisions (although the Act does not even mention it) allow obtaining permission to disregard the very same decisions by the Mayor's decree, which may all seem practical, but at the same time is a huge, unbelievable potential for various unlawful arrangements or at least for creating a public image of some kind of favoring, bribe or corruption. The basic principles and key elements are more than obvious. The legislator has enabled to make decisions on prohibition so that tourists and the others during the tourist season are protected from unpleasant emissions, that can be audible and inaudible, and within these another most common is dust (unpleasant smells are not characteristic for construction works). It is unclear how this can be related to the legal text prohibiting the execution of the ground works and works on constructing structure of a building, and that there is no word about the level of noise and / or the amount of dust. This is even more absurd since there is a valid the Noise Protection Act and internationally recognized measurements that prove that the level of noise in building is really lower than many other sources of noise which are not prevented, even in the middle of the tourist season at the very heart of tourist sites (from the noise of bus engines to the motorcycles etc.). It is completely unclear and unacceptable that the Government of the Republic of Croatia is just observing what is happening and doing absolutely nothing about it, even though it knows and it must know that in Zagreb, for example, there are no such prohibitions as well as in all of regulated Europe. A broad interpretation of the term the right of ownership, which in its practice is carried out by the Constitutional Court is very important. It means the right to work - building within its activity and at the same time it jeopardizes the investor's right of ownership on the land or the facility where further works are to be performed. All this represents one's property, and thus something covered by the constitutionally legal (extensively interpreted) meaning of the term property right. Namely, the court has consistently held that property within the meaning of Article 48 paragraph 1 of the Constitution "must be very broadly interpreted", since it includes "basically all property rights" under the protection of Article 1 of Protocol No. 1. of the Convention for the Protection of Human Rights and Fundamental Freedoms<sup>15</sup> (see, for example, Constitutional Court Decisions No: U-III-661/1999 , 13 March 2000, U-III-72/1995 , 11 April 2000; -III-551/1999 , 25 May 2000, U-III-476/2000 14 June 2000, etc.), including economic interests which are by the very nature of things inherent to property, and legitimate expectations of the parties based on legal acts, that their property rights will be respected and thus their realization effectively protected, and that, when the limitation comes, it **MUST BE PROPORTIONATE**, so it is necessary to try to lessen the limitations in a clear and acceptable relation to benefit<sup>16</sup>.

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<sup>15</sup> See, for example, the Decisions of the Constitutional Court No. U-III-661/1999 of 13 March 2000; U-III-72/1995 of 11 April 2000; U-III-551/1999 of 25 May 2000; U-III-476/2000 of 14 June 2000, etc. Source: INFODOK service of the Croatian Parliament, [www.sabor.hr](http://www.sabor.hr).

<sup>16</sup> Snježana Bagić (current Deputy President of the Constitutional Court of the Republic of Croatia), The Principle of Proportionality in the Case-law of European Courts and the Croatian Constitutional Court (with particular emphasis to property issues), Faculty of Law, University of Zagreb, Zagreb, 2016, p. 1-434.

Returning to the principle of proportionality, it is obvious that a lesser limitation would be to prohibit the activities (not only in building) that cause the noise above a certain level and to control the amount of dust more strictly. When we imagine a respectable investor, for example from Austria or Italy, that we would like to invest in Croatia, it is clear that he will (negatively) react when he realizes that at any location along the coast the construction will last much longer than in Vienna or Rome, and also much longer than in Zagreb and this is so only because of the legalized "racketeering" that is contrary to the Constitution of the Republic of Croatia. At the same time, the investor will see that in the same place in the middle of the season, a 15-year old bus has more emissions than a whole neat building site, not even to mention other sources of emissions. All that we need to be like Vienna and Rome is to apply the Noise Protection Act and amended it with Dust Protection Act, which will be binding to everyone, not just construction workers.

### *3.2.3. Law on state support for agriculture and rural development (article 19)*

It is a very important law which regulates the issue of support for agriculture and rural development in general, which is the terminology behind which are the EU funds intended for that purpose. The purpose is very important and the amount of money is very significant without which most of these activities would not have been possible. The only legitimate thing in this is an objective of those who give the funds and those who share them in accordance with Croatian and European law. Of course, it should be remembered that the Constitution is above any other legal norm, including European. Specifically, Article 19 of the Constitution reads as follows:

- Individual acts of the state administration and bodies having public authority must be based on the law.
- Judicial control of the legitimacy of individual acts of administrative authorities and bodies with public authority is guaranteed.

In this text of the highest act it is not really clear how it is possible that Art. 19 of Law on state support for agriculture and rural development reads:

#### Decisions

##### Article 19

1. The Payment Agency for each user makes a Decision on the achieving rights to direct payments.
2. The Decision referred to in paragraph 1 of this Article shall not be an administrative act.
3. At the Decision referred to in paragraph 1 of this Article, the party has the right to file a complaint to the Complaints Board in the Payment Agency within 15 days from the receipt of the Decision.

It is stipulated that the decision from paragraph 1 is not an administrative act (and if it is not an administrative act than an administrative lawsuit is not allowed), but it is not stipulated that the decision from paragraph 2 is not an administrative act. This is simply not possible to assume because it is an extremely important limitation of the constitutional right to court access. Of course, there are situations in which acts brought on different levels are or are not equal, so some acts are and some are not administrative (finally, the verdict in the administrative lawsuit is a verdict, but it is not an administrative act). In any case, the doubt **MUST** be interpreted in favorem of the party and the decision on the complaint considered as an administrative act. If that decision is an administrative act, then an administrative lawsuit is allowed, and if the administrative lawsuit is allowed then everything is in accordance with the Constitution. However, practice is more than clear, administrative lawsuits are dismissed as inadmissible.

When we (again) imagine a respectable investor from e.g. Austria or Italy that we would like to invest in Croatia, it is clear he will (negatively) react when he realizes that a Croatian partner participating in EU funds, independent of the Constitution and contrary to the Constitution does not have any judicial protection in that process. On the contrary, everything is reduced to a couple of clerks on different levels under the protection of the minister in charge, whose attitude on this, despite the change of government, HAS NOT BEEN CHANGED. The courts (so far the first instance administrative courts, the opinion of the Appellate Court has not been given yet) behave as if they do not see what they MUST see being the top of the profession. All that has to be done is just to read and apply the Constitution properly, correctly and promptly, and not to leave everything to be solved by someone else in 5 or more years.

### 3.3. CROATIAN LEGAL PRACTICE

#### 3.3.1. General

Sometimes the key issue is not in legal norms at all. However, it “gets stuck” in the interpretation and any reference to, for example, the legal principles of the European *acquis* (especially legitimate expectation, proportionality, equality before the law, not to mention the target or teleological interpretation) and the court practice is negatively perceived. We have chosen a particular and almost incredible case.

#### 3.3.2. The utilities act – art.31, par.2

The Utilities Act is the key law on utility payments in construction and there should be nothing controversial about it. In practice, unfortunately, a lot of unlawful things happen, and if we do not change that or until we do so, all investors will leave. A big foreign investor has decided to invest millions in the so-called *green field* investment by building a large shopping center on a deprived area. After the building permit had been issued, the investor changed his mind and asked for a change of permit for a significantly smaller surface cubage. He considered that there would be no problems with that since he had given insurance funds for the full surface cubage the first time the permit was issued and the same body issued both permits, but he received a distraint of HRK 12,000,000 with the threat of distraining (all for a utility contribution of an object that has never even started to be built !!!) even more. The investor unsuccessfully requested from the local self-government unit to return the security funds and the overpaid amount (the City of Zagreb claims it is not important that the construction has not begun considering it is the investor’s problem) and this case has been dragging on for years now.

The Utilities Act in Art.31.reads:

1. The utility contribution is the income of the local self-government unit’s budget. The funds of the utility contribution are intended to finance the construction of facilities and units of the utilities infrastructure referred to in Article 30, paragraph 1 of this Act.
2. The utility contribution is paid by the owner of the building plot, respectively the investor, on which the structure is being built.<sup>17</sup>

To everyone neutral it should be clear that the legal text is not about a future time, but the present, so it has to be about the object for which the construction HAD ALREADY STARTED. When we add target interpretation to the language interpretation, things are the same. In a hypothetical neat situation everyone would make sure not to send a wrong message to the world, the investor would have a friend and partner, not an enemy in the local self-government unit.

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<sup>17</sup> Emphasized by the author.

This would somehow still be possible to understand if it was the case of the first investment. However, it happened in Zagreb! During the procedure, the investor even came across a verdict of the High Administrative Court, which in the same situation (although with less money involved) made a clear ruling in favor of the investor, so he presented it to the City of Zagreb convinced that (because the ruling is binding for everyone) finally everything will be solved in his favor. Unfortunately, nothing changed. For the time being, the message sent to the investors is disastrous.

#### 4. CONCLUSION

We have presented two examples of law that are really unbelievable, but the good thing is that they can be changed without the need to invest a significant amount of money in that change. It's removing obstacles by the legislator's "stroke of a pen", but the move must be methodical and unhasty and mustn't cause other unnecessary problems. However, it must be fast. We have also highlighted a problem in the court practice that is even easier to solve, only the verdicts of the higher courts must be in the true sense binding for the lower courts (which is even easier for only four existing specialized courts) and for administrative bodies if it is about administrative courts. Of course, when the problem is detected, the legislator could (must) react and amended the legal norm with a subsequent text. The fact that we have already lost so much on the investment plan is negative. Therefore, by accepting what we have already lost, we must do everything to lose as little as possible in the future, at least for the reasons of the legal framework on which we can and must act IMMEDIATELY.

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