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Article

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Working Conditions and Flexicurity Measures as Key Drivers of Economic Growth: Empirical Evidence for Europe[1]

Gratiela Georgiana NOJA – Mirela CRISTEA***

Abstract

The paper aims to design a general assessment framework of working conditions in Europe and associated flexicurity measures, as main drivers of economic growth. We focused on a panel of EU-28 MS and on a sub-panel of 10 CEE countries. First, we conducted a complex cluster analysis based on the Ward method and Euclidian distance that allowed for a proper grouping of EU-28 MS according to the three job quality indices. Second, we configured two SEM models that capture the impact of working conditions and flexicurity measures on labor productivity and economic output. The results highlight that CEE countries have a less flexible working program compared to the other MS. The estimations for flexicurity and job quality interdependencies reveal important positive contributions of the working dimensions and external numerical flexibility credentials to labor productivity, GDP per capita, and a reduction of the poverty risk.

Keywords: *working conditions, flexicurity, economic growth, welfare, labor market, cluster analysis, structural equations modelling (SEM)*

JEL Classification: J81, J28, O47

Introduction

The world economy is significantly shaped by a complex and dynamic globalization process that has decisively influenced the labor markets globally, thus revealing the importance of coherent regulations on working conditions,

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employment through contractual job arrangements, social security benefits and educational supporting measures (especially, lifelong learning programs). Therefore, the employers face an important challenge to design proper working conditions and flexible working arrangements that have become an incentive for active labor market participation of women, elderly people, or of those with disabilities or numerous family care responsibilities, reframed as key elements of welfare and sustainable economic development.

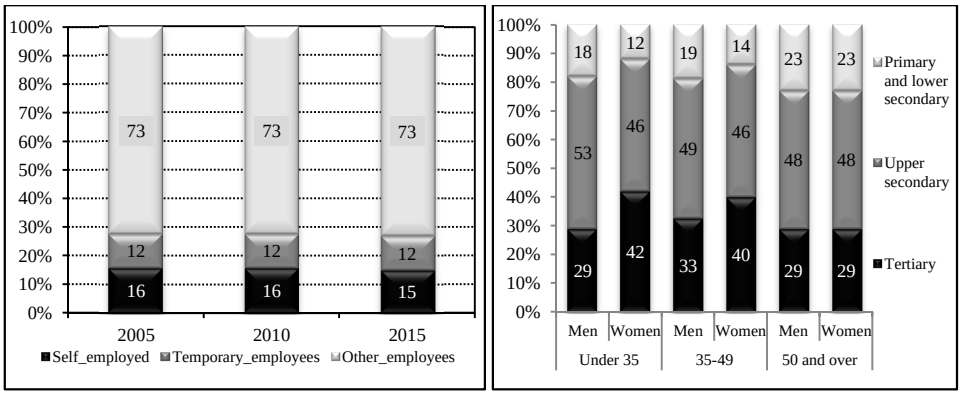
The general portrait of the workforce in Europe in terms of employment situation and status, workplace conditions and performance, educational level and job quality offsets the fact that in 2015 there were 221 million persons employed within the European Union (EU-28) and 259 million persons overall the 35 countries considered by the sixth European Working Conditions Survey (EWCS) that also covers economies outside the EU, like Norway, Switzerland, Turkey, Serbia and others (Eurofound, 2015). During 2005 – 2015 there has been a slight increase in part-time employment among the EU Member States (MS), with a continuous upward trend observed both among men and women, even though the share of women with flexible contractual arrangements being three times much larger than of men. Moreover, a decisive share (73%) is given by permanent employees, while 15% are self-employed and 12% have temporary contracts, as we see in Figure 1, left (Eurofound, 2015). Thus, even though there have been major changes and transformations, based on impacts of the 2008 crisis and the heterogeneity of the EU labour markets. The educational level of EU-28 employees by age and gender in 2015 (Figure 1, right), has the highest share for upper secondary education (46 – 53%). Still, the educational level has significantly increased during the last decade, especially towards tertiary education (from 25% in 2005 to 33% in 2015), while the share of the workforce with primary education has decreased from 25% to 18% during the same period (Eurofound, 2015). Therefore, current European employment strategies focus on job quality and skills formation as a core element used to boost economic growth towards the objectives set within the framework of Europe 2020 agenda and "The new Skills Agenda for Europe Strategy".

The first survey in EU-28 MS on labour market skills was the European Skills and Jobs Survey (ESJS), carried out in 2014, based on Cedefop data. The ESJS investigated the skills evolution and the skill discrepancy in connection with the modifying complexity of the skills required by employers and effects of 2008 economic crisis. The main results reveal that "about 45% of employees in the EU-28 Member States experienced skill mismatch: 5% of workers felt that some of their skills are lower than needed to do their job and 39% believed that they have more skills than needed by their job" (Cedefop, 2015, p. 38). In this

respect, the European policies are needed in order to diminish skill discrepancy, increase productivity of EU companies and enhance the workers' well-being.

F i g u r e 1

Employment Status in Europe 2005 – 2015 (%) (left), and the Educational Level of Employees by Age and Gender 2015 (%) (right), According to the 6th EWCS



Source: Own process based on Eurofound (2015).

Working conditions in Europe are still under the so-called "standard employment relations", involving a full-time relationship that guarantees workers with a high level of income and employment security in the labour market, as a basic feature of flexicurity. Flexicurity refers to a set of laws implemented at the level of EU, after the so-called "Danish model" (Madsen, 2004), which was improved and adapted to the 2008 crisis implications, being oriented in 2013 to "four dimensions: flexible and reliable contractual agreements, lifelong learning, active labour market policies and social security systems" (European Commission, 2013, p. 3). Still, there were some concerns related to surviving of flexicurity concept after the crisis begins, since social security dimension has suffered the most. But, on the contrary, the EU policies revitalized the flexicurity concept in 2015, "including among others a fifth ingredient on open markets and supportive labor taxation" (Bekker, 2018, p. 182), and modernized the other four components.

In light of these developments, the general objective pursued in the research endeavor is to assess how employees do their work and under what conditions within the EU, as well as how these credentials and various adopted measures can influence (positively or negatively) workers' productivity and the overall economic output, with important spillovers on their living standards and welfare. Thus, the research aims to: (i) analyze the differences between the EU MS in terms of workers' performance according to specific job quality dimensions and to hereby form clusters of EU-28 countries based on these outcomes; (ii) as well

as to further assess the impact of flexicurity measures upon labor productivity of employees and economic welfare measured through the Gross Domestic Product (GDP) per capita and by the at-risk-of-poverty rate.

The paper is structured on four main sections. The first part briefly introduces the readers into main aspects of our research with a general portrait of the workforce in Europe and its transformations during the last decade under the crisis effects, revealed by two surveys conducted by EU (EWCS and ESJS). The second section reveals the most relevant European strategies for working conditions (Europe 2020 and New Skills Agenda for Europe), and main theories related to the importance of working conditions and job quality for labor productivity, performance and economic growth. The last two sections detail the methodology, data and empirical results of the performed study. The final part of the paper summarizes the most important concluding remarks, research implications, limitations and future developments.

1. Literature Review

1.1. European Labour Market Strategies

The main European employment strategies, highlighting the importance of job quality and skills formation, are "Europe 2020" and "The New Skills Agenda for Europe".

According to Europe 2020 Strategy, the target set for the employment rate for the 20 – 64 age is 75% of the total population with the same age in EU-28, being differentiated on each MS. Regarding education, the targets are to reduce the early leavers from education and training at less than 10% of the population aged 18 – 24, and to increase the share of higher education graduates to 40% of the population aged 30 – 34 (European Commission, 2010). Thus, the employment rate for 20 – 64 aged population was 71.1% for EU-28 in 2016, an upward trend started in 2013 (when it was 68.4%), the highest rate being in Sweden (81.2%, having as national target 80%), and lowest in Greece (56.2%, with a national target for 70% in 2020).

In order to foster the Europe 2020 targets fulfilment, starting with June 2016, the European Commission launched "The new Skills Agenda for Europe Strategy", which comprises three main directions: "1. Improving the quality and relevance of skills formation; 2. Making skills and qualifications more visible and comparable; 3. Improving skills intelligence and information for better career choices" (European Commission, 2016, p. 3). These directions are achieved through ten actions, being established a precise timetable for their implementation. Until

March 2018, the first eight actions started to be implemented, while the last two actions are under discussions with EU MS. We note the high importance especially of the following actions for the labour market: "European Qualifications Framework", starting in May 2017, which make possible a better reliance for all skills in the EU; "Vocational education and training (VET)" for supporting "job--specific and transversal skills, facilitating the transition into employment and maintaining and updating the skills of the workforce according to sectoral, regional and local needs" (European Commission, 2016, p. 6); and "Key Competences", launched in January 2018, in order to develop the entrepreneurial and innovation skills for more people, becoming essential in the current century.

1.2. The Main Findings on Working Conditions and Flexicurity Research

The economic literature highlights numerous theories that relate working conditions and job quality with job satisfaction, labor productivity and economic growth. The general dimensions of job quality include the working environment, work intensity, the quality of working time, skills, earnings, social environment and career prospects. Therefore, the conditions under which an employee is completing his job vary significantly from one sector to another, as well as from a country to the other, ranging from extremely difficult and sometimes dangerous to worker's health and wellbeing to completely comfortable jobs (Bakotic and Babic, 2013). Awan and Tahir (2015) highlight that the environment where workers perform their tasks collectively in order to achieve overall firm objectives defines the working context. Moreover, the working environment implies a certain physical location of a particular job from a geographical point of view, as well as all the instruments and machineries used by workers in order to perform their job tasks (Mutia and Sikalieh, 2014). Economic globalization has brought important new features to the working environment dimension since the strong interdependencies between countries and increased values and volumes of international trade and investment. As a result, due to the exposure to international markets and intensified competition, firms tend to pay more attention to local working conditions in order to increase labor productivity with a positive spillover on firm's outcomes. Thus, a specific focus is given both to wages and non-wage working conditions, such as compulsory overtime, abusive supervisors, absence of written contracts, health and safety conditions, union representation, family benefits or childcare.

Many studies (Taiwo, 2010; Abrey and Smallwood, 2014) tend to focus on analyzing the interdependence between the working conditions and labor productivity, with a further impact upon firm's performance and overall economic growth. Labor productivity is mainly related to acquiring new skills, however

a large part of its variations is due to the working conditions in which the employee is performing his work tasks (Akinyele, 2007; Taiwo, 2010).

Within this framework, the specific ways in which an employee shares his knowledge within the firm largely depend on its well-being and general conditions of the work environment. Hence, improved working conditions lead to increased work effectiveness and labor productivity, these two factors being essential for firms' survival and growth. Furthermore, being strongly interconnected, all these shaping factors contribute to the general welfare of a nation, since labor is the most dynamic of all the factors engaged for obtaining the socio-economic wealth of a country (Taiwo, 2010). On the other hand, the working environment is comprised of three major components, namely the human environment, the technical environment and the organizational environment (Opperman, 2002), all of these being fundamental pillars for the proper development of an employee at his workplace. Moreover, according to Kyko (2005) these components further define the type of the working environment towards conducive (favorable working conditions granted to employees and improved job quality that allow for an adequate personal and professional development) or toxic work (providing unfavorable working conditions and unpleasant experiences that could lead to acquiring negative traits and bad changes in the employee's behavior).

The labor market performance under flexicurity strategies and policies represents a largely debated subject in literature. The average number of hours worked per week within the EU, viewed as a fundamental dimension of working time and a measure of labor flexibility, has started to slightly increase, even though it is still below the pre-crisis level, after a 2008 – 2013 period characterized through an important decrease in working hours at a much faster pace than the number of people employed. Within this context, under the crisis implications, the flexicurity notion has been modernized and adapted as a strategic and efficient policy to combine the two conflicting perspectives of employers and employees and to counteract the raising of unemployment rate (European Commission, 2013; Shahidi et al., 2016).

Thus, the five new coordinates of the flexicurity policies included into EU strategies are: "(i) flexible and reliable labor contracts that promote job quality and smooth labor market transitions and avoid a two-tier labor market; (ii) comprehensive lifelong learning strategies (LLL); (iii) effective policies to help the unemployed re-enter the labor market; (iv) adequate and sustainable social protection systems that contribute effectively and efficiently throughout the life cycle both to social inclusion and labor market integration; (v) open and competitive product and services markets, reduce the tax wedge on labor, particularly on low-earners, in a budgetary-neutral way to foster job creation" (Bekker, 2018,

p. 182). On one hand, these are protective mechanisms against specific labor market risks that ensure employment and unemployment protection legislation through contractual agreements and modern social security contributions and benefits, income levels. On the other hand, they create the framework for educational improvement, with skills adapted to the labour market needs (LLL), and influence the labor market capacity to adapt itself to the various changes in economic conditions (ALMPs). ALMPs represent "policies with positive impact over the labour market performance and integration of the unemployed" (Noja et al., 2018, p. 4). There are numerous factors that determine and shape the capacity of economic agents to adjust to business cycle variations that are essential in explaining the existing differences related to labor market performance across the EU MS and their response to the consequences of 2008 crisis. The promoters of flexicurity policies sustain that there are advantages both for employees and employers, such us: employees can get benefits from softening the contractual arrangements within a dynamic and increasingly competitive economic environment; while workers are protected by the adverse effects and social consequences of flexible forms of employment, thus creating a good working environment (Shahidi et al., 2016). We highlight also "the matching" model proposed by Pissarides (2010, p. 397), which "...takes time, irrespective of the wage offered by each job. A process whereby both workers and firms search for each other and jointly either accept or reject the match seemed to be closer to reality". There are outlined also the importance of labor market policies offered by employers, different employment protection legislation across EU countries, unemployment benefits (increased protection). The findings are that "the southern European countries have much stricter employment protection legislation than the northern countries" (Pissarides, 2010, p. 407). This model is in line with the flexicurity policies.

Flexicurity is an extremely complex concept that has suffered many changes and updates, especially after the global economic crisis in 2008, depending on new features of the European labour market needs. Flexicurity is now seen both as a strategic policy focused on the efforts accomplished by states and companies to ensure flexibility and security, as well as through the final outputs – states and effects/results – of all the implemented measures.

Therefore, in this paper, we've reconfigured new (Muffels et al., 2010; Chung, 2012; Nardo and Rossetti, 2013) and old (Wilthagen, 1998) flexicurity approaches into one coherent unitary perspective. From the five forms of flexibility (internal numerical, external numerical, internal functional, external functional and wage flexibility) and seven different forms of security (job security, work security, income security, employment security, employment opportunities, representation,

work-life balance) defined by Wilthagen (1998), we've selected three coordinates, respectively one for flexibility – external numerical flexibility – and two for security – income and employment security, that are mostly related to working conditions. These three coordinates are captured both in terms of the efforts performed nationally and by companies and the effects induced by these types of measures (flexicurity states) into a complex Structural Equations Model (SEM), estimated accordingly through the Maximum Likelihood Estimators (MLE).

2. Data and Methodology

Within the performed empirical analysis we have focused on three main job quality indices (data) including: (i) the working time (number of hours worked per week, working program/hours flexibility in terms of fixed program or same hours worked every week, work at night); (ii) physical factors (job difficulty); (iii) skills, training and career prospects (paid training, difficulty in finding a job).

To this respect, for the job quality dimensions we have used the latest dataset and information compiled by Eurofound through its sixth European Working Conditions Survey (EWCS) performed in 2015. The data were gathered by Eurofound in cooperation with Ipsos during February-September 2015, with more than 43,000 workers (almost 44,000) being interviewed, thus covering 35 European countries (approximately 1000 to 3000 persons in every country). More precisely, the sixth EWCS study includes workers from EU-28 plus Switzerland, Norway, Albania, Macedonia, Montenegro, Serbia, and Turkey. The data series were than completed by using the Eurostat database, EU LFS (Labor Force Survey). The EWCS questions were assessed from a comparative perspective with the European Skills and Jobs Survey (ESJS), conducted in 2014 (Cedefop, 2015). However, EWCS data were preffered since the EWCS 2015 has recent information, uses a different sampling methodology and is constructed on a face-to-face mode, whereas Cedefop applies telephone and online questionnaires. On the other hand, as Cedefop (2015, pp. 23 – 25) mentions in its Technical Report, the responses to comparable questions in EWCS are consistent across both surveys and very similar.

In terms of flexicurity, we've firstly focused on the core features of these policies as synthesised by Bekker (2018) in our first SEM model, and to better capture each flexicurity dimension for the Central and Eastern European (CEE) countries, we've compiled a new set of indicators used as proxies in SEM modelling.

In the second flexicurity approach lead by Chung (2012) and Nardo and Rosetti (2013), for the flexicurity efforts in SEM models we've selected: (i) External numerical flexibility: EPL index – a composite indicator of Employment

Protection Legislation governing regular contracts, individual dismissals (Eurostat and OECD, Employment Protection Indicators); the employees with temporary contracts (TC) as share of the total number of employees (temporary = when the employer and employee commonly establish that its termination is determined by objective conditions); (ii) Income security: income levels measured through the average wages (per capita, Euros); the passive labour market policies (PLMPs expenditures as a % of GDP) that ensure income support programs during unemployment (net social benefits – NSB, and unemployment benefits – UB, measured through net social protection as a % of GDP); (iii) Employment security: active labour market policies (ALMPs expenditures as a % of GDP): labour market services, training programs, employment incentives, supported employment and rehabilitation, direct job creation and start-up incentives; lifelong learning (LLL), a fundamental indicator that comprises persons aged between 15 and 64 years old which have attended an educational or training program as a percentage of the total population on the same age group (Eurostat, 2017). For the flexicurity states/effects we've selected one indicator for each flexicurity dimension, respectively: the duration of working life (at individual-aggregated level) (WLB) was introduced to capture external numerical flexibility effects, respectively the number of years spent by a 15 years old person as being actively on the labour market throughout its lifetime; the at-risk-of-poverty-rate (Pov_r) comprises income security effects/states; the employment rate (ER) is used to account for the employment security outputs/states.

Eurostat and OECD are the main databases used to compile the flexicurity indicators.

In order to apply our methodology, and to ensure a proper comparability of data between countries, respectively to remove the variations and associated differences, in the first stage of the performed research we have standardized the indicators, this method allowing to develop a composite indicator calculated according to the equation (1) (OECD, 2005; Chung, 2012, p. 167):

$$y_i = \frac{x_i - mean}{sd} \tag{1}$$

where

x_i – represents the crude value of the indicator,

sd – standard deviation.

Thus, by using the compounded indicators we can better assess the relationship and interdependencies between the three dimensions of job quality (working conditions) considered within the paper, being able to make accurate comparisons between countries.

In order to demonstrate our first aim outlined into introduction section of this paper, namely to analyze the differences between the EU MS in terms of workers' performance according to specific job quality dimensions and to hereby form cluster of EU-28 countries based on these outcomes, we further present the methodology of its achieving.

Cluster forming and analysis was performed based on the standardized values of the working conditions indicators, by using the Ward method (wardslinkage) for hierarchical clusters. This method attests that the distance between two clusters *A* and *B* is given by how much the sum of squares will increase when they are cumulated, as we can see in equation (2) (Cornish, 2007).

$$\Delta(A,B) = \sum_{\in A\cup B} \left\| \overrightarrow{x_i} - \overrightarrow{m_{A\cup B}} \right\|^2 - \sum_{i\in A} \left\| \overrightarrow{x_i} - \overrightarrow{m_A} \right\|^2 - \sum_{i\in B} \left\| \overrightarrow{x_i} - \overrightarrow{m_B} \right\|^2 = \frac{n_A n_B}{n_A + n_B} \left\| \overrightarrow{m_A} - \overrightarrow{m_B} \right\|^2 \quad (2)$$

where

$\overrightarrow{m}_j$ – represents the centre of cluster *j*;

n_j – number of points in it;

Δ – cumulative cost of joining the *A* and *B* clusters.

Moreover, we measure the Euclidian distance between the subjects. When the Euclidian distance is being used, the measurement scale of considered variables represents an important element for the performed analysis, due to the fact that if we change the scale it will obviously modify the distance between subjects. Furthermore, if a variable has a wider range of variation compared to the others, it will tend to dominate. Thus, in order to ensure a precise and accurate research, each variable has been standardized, not without limitations though, because the standardization method tends to reduce the variability (distance) between clusters (Cornish, 2007, p. 2).

Thus, for the first objective of our research, we analyze the following hypothesis: H1: *There are significant differences between the EU MS in terms of the outcomes resulted on three job quality indices (working time; physical factors; and skills, training and career prospects) that shape the working environment for employees, CEE countries having poor performances compared to the other MS.*

The second aim of the paper is to assess the flexicurity measures impact upon labor productivity and economic welfare measured through the GDP per capita and by the at-risk-of-poverty rate.

The empirical analysis applied for this aim is based on structural equations modelling (SEM) in order to comprise and highlight the links (direct, indirect, total) between the working dimensions, associated flexicurity measures and their economic consequences. The general representation of the „SEM model is determined by applying the system of equations (3).

$$\begin{cases} b_{11}y_{2t} + ... + b_{1m}y_{mt} + c_{11}x_{1t} + ... + c_{1n}x_{nt} = \varepsilon_{1t} \\ b_{21}y_{2t} + ... + b_{2m}y_{mt} + c_{21}x_{1t} + ... + c_{2n}x_{nt} = \varepsilon_{2t} \\ ..... \\ b_{m1}y_{1t} + ... + b_{mm}y_{mt} + c_{m1}x_{nt} + ... + c_{mn}x_{nt} = \varepsilon_{mt} \end{cases} \quad (3)$$

where

t – number of observed time periods;

b_{ij} – represents the y_{ij} endogenous variable's parameters;

c_{ij} – x_{ij} exogenous variable's parameters, i = 1, …, m; j = 1, …, n (Noja and Moroc, 2016, p. 153; Noja and Son, 2016).

For the second aim, based also on the matching model (Pissarides, 2010), which underlines the differences between countries, we've analyzed the following hypothesis: H2: *There is a significant correlation (interdependence) between the flexicurity model coordinates (two models) and labor productivity/economic development for CEE countries*.

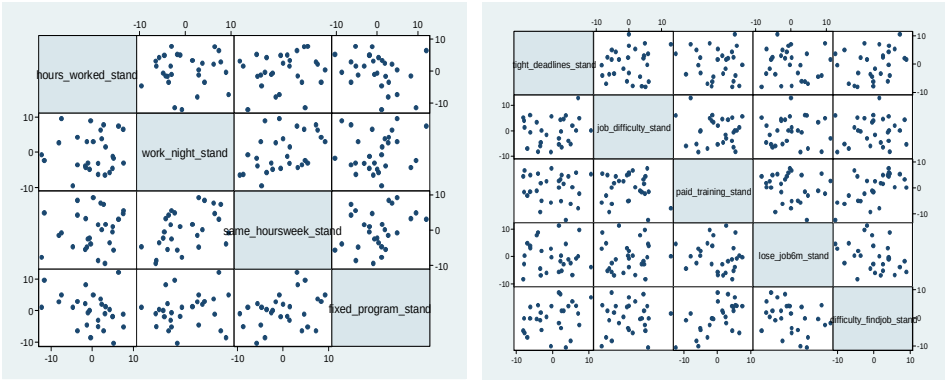
3. Results and Discussions

3.1. Results of the Cluster Analysis

Hence, in order to verify our first hypothesis (H1), in the initial stages of our empirical analysis we have focused on cluster forming and grouping of EU-28 countries according to the performance achieved by their employees on three basic dimensions of the working environment, respectively the: 1. working time; 2. physical factors; 3. and skills, training and career prospects. The correlation matrixes of all the indicators used within this context as proxies for specific working conditions are presented in Figure 2.

F i g u r e 2

Correlation Matrixes of the Indicators Used for Cluster Analysis



Source: Own process of panel data in Stata 13.

For the working time dimension we took into account two elements, namely: hours worked (HW) and fixed program (FP). In terms of the physical factors influencing the work performed by the employees within their organizations we have focused on job difficulty (JD), namely if the job involves carrying or moving heavy loads. Moreover, for the skills, training and career prospects dimension we've used the attendance to trainings paid (PT) for the employees by their employers along with the difficulty in finding a job (DIFJ – the prospects of finding a job with similar wage if the employee would lose or quit his current job).

T a b l e 1

Cluster Analysis Results for the Assessment of Job Quality Dimensions at EU-28 Level

Indicator	Cluster 1			Cluster 2			Cluster 3			Cluster 4			F	R-sq
	N	mean	sd	N	mean	sd	N	mean	sd	N	mean	sd		
Working time														
HW	14	0.726	1.826	7	5.872	1.342	5	–5.487	2.159	2	–11.92	0.433	74.90***	0.903
FP	4	0.664	6.266	9	3.100	4.827	11	–2.530	5.138	4	–0.681	3.020	2.157	0.212
Physical factors														
JD	9	–0.227	1.466	9	4.896	0.886	9	–6.093	1.502	1	12.83	–	137.7***	0.945
Skills, training and career prospects														
PT	12	0.194	2.104	9	5.490	1.044	6	–6.554	1.744	1	–12.41	–	75.28***	0.903
DIFJ	4	7.584	1.416	9	3.224	1.093	11	–2.164	2.024	4	–8.886	1.718	84.52***	0.913

Source: Authors' research.

The results obtained after processing the EWCS data in terms of cluster forming according to the Ward method are synthesized in Table 1.

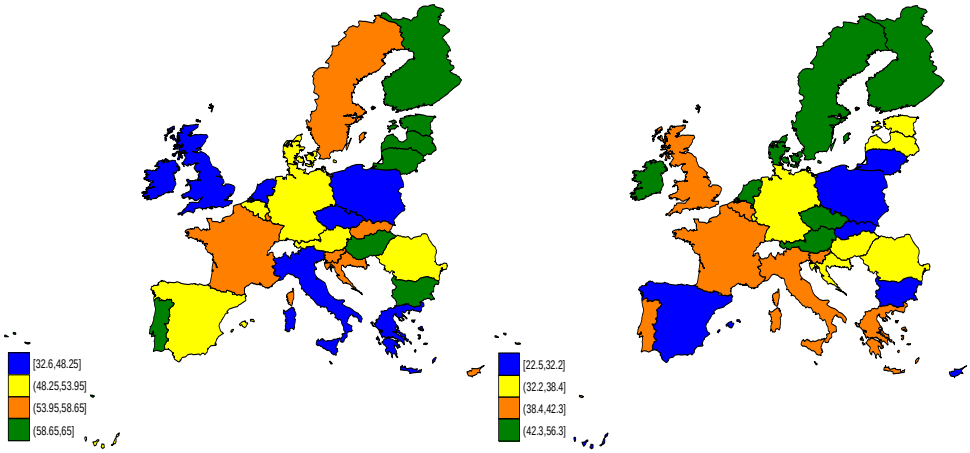
In order to cover for the working time features and usual program of an employee, the two questions addressed within the study were (Eurofound, 2015): (i) how many hours do you usually work per week in your current paid job? (HW) and (ii) do you have fixed starting and finishing hours in your working program? (FP).

The graphical mapping representation of the working time dimension reveals important differences across Europe and between the EU-28 MS in terms of the working hours (Figure 3, left) and flexibility (Figure 3, right). There are countries with highest number of hours worked in the framework of fixed program (such as Finland or France), while others tend to focus on flexible arrangements in terms of starting and finishing times at work with a reduced number of hours worked (namely countries in Central and Eastern Europe, CEE). Based on the answers given by employees all across Europe and compiled by Eurofound into the sixth EWCS study we have performed the cluster forming and analysis by using the Ward method specific for hierarchical clusters, that allowed us to identify four main clusters of EU-28 countries both in terms of the working

hours (Figure 4, left) and fixed program (Figure 4, right), as shown by the dendrograms.

F i g u r e 3

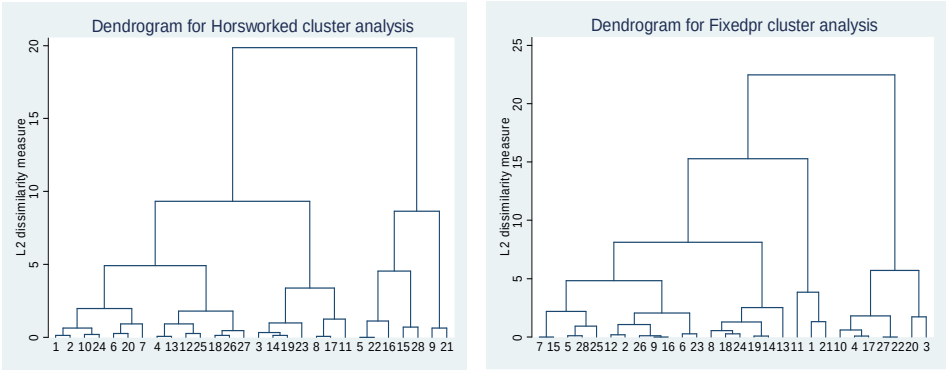
Weekly Hours Worked (left) and Fixed Program (right) within the European Union



Source: Own process of panel data.

F i g u r e 4

Cluster Dendrograms for Working Hours (left) and Fixed Program (right)



Source: Own process of panel data in Stata 13.

Thus (Table 2), we have analyzed the average number of weekly hours worked by an employee and the type of working program in their interdependence with labor productivity and we have noticed that in most of the EU MS (21 countries grouped into clusters C1 and C2) the employees tend to work a significant number of hours with positive outputs in terms of productivity. On the other

hand, as regarding the fixed program, 13 countries registered high and medium fixed program (clusters C1 and C2).

T a b l e 2

Clusters Associated with the Working Time Dimension of Working Conditions/ Environment

No.	Clusters	Working time		Clusters	No.
		Hours worked	Fixed program		
C1	Slovenia, Slovak Republic, Malta, Spain, Romania, Austria, Germany, Sweden, Luxembourg, Cyprus, Croatia, France, Denmark, Belgium	Medium	Medium	United Kingdom, Denmark, Sweden, Malta	C1
C2	Hungary, Latvia, Lithuania, Estonia, Bulgaria, Portugal, Finland	High	High	Luxembourg, Belgium, France, Estonia, Netherlands, Romania, Finland, Ireland, Germany	C2
C3	Italy, Ireland, Czech Republic, United Kingdom, Poland	Medium to low	Low	Czech Republic, Poland, Hungary, Spain, Latvia, Slovak Republic, Croatia, Austria, Bulgaria, Lithuania, Slovenia	C3
C4	Netherlands, Greece	Low	Medium to low	Cyprus, Portugal, Greece, Italy	C4

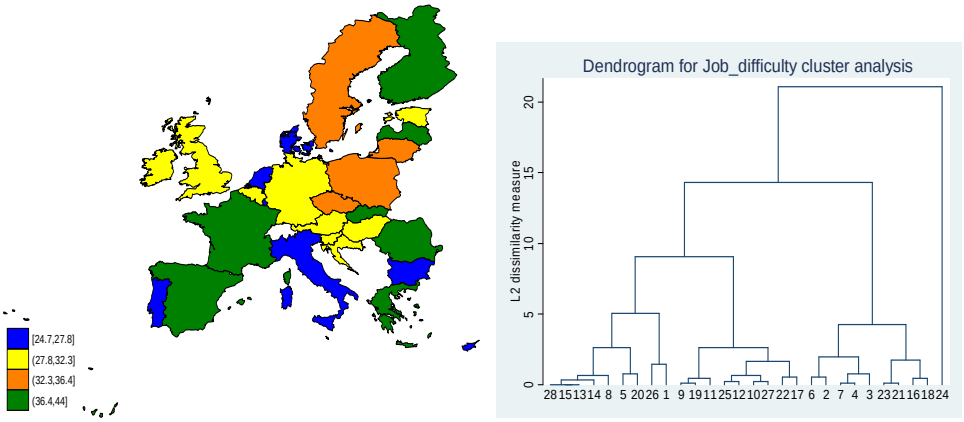
Source: Authors' research.

Significant performances can be obtained by configuring flexible working time arrangements (even though with a strict focus on starting and finishing the working program). Nevertheless, Greece, Italy, Czech Republic and Poland (Table 2, Clusters C3 and C4) tend to have some of the lowest results overall this particular working dimension, with reduced number of hours worked and no strictness in terms of starting and ending the working program that tend to induce poor productivity outputs. On the other hand, some Eastern European countries and the Baltic States have among the largest number of hours worked compared to the other EU MS, even though they don't necessarily have a strict working program, with different results however as regards the impact upon labor productivity.

The other considered dimension of the working conditions relates to the physical factors influencing the work performed by the employees, namely job difficulty (JD). The question addressed to this respect within the study was: "Does your work involve carrying or moving heavy loads?". From the graphical mapping representation in Figure 5 (left) we can observe that EU MS in CEE have the highest degree of job difficulty compared to the other countries, along with Sweden and Finland, but also in France, Spain and Greece workers tend to confront with difficult working conditions.

Figure 5

Job Difficulty Measured through the Physical Factors Affecting the Work of EU-28 Employees (left) and the Dendrogram for Cluster Analysis of this Job Quality Dimension (right)



Source: Own process of panel data.

The results obtained after processing the data collected by Eurofound in terms of cluster forming and analysis are represented by Figure 5 (right) and synthesized in Table 3. The Ward clustering method allowed us to extract Romania's position (C4) out of the 28 EU MS as the country with the most difficult job conditions in which an employee has to perform his work, mainly involving carrying or moving heavy loads (Marcu, Meghisan and Ciobanu, 2015). At close levels of job difficulty we can also find 10 countries (C2) from CEE (namely Poland, Slovak Republic), the Baltic States (Lithuania, Latvia), the Nordic states (Sweden and Finland), along with France, Spain and Greece. On the other hand, Bulgaria is placed among the old EU-15 MS (C3, such as Luxembourg, Germany, Belgium, Italy or Denmark), which tend to grant better working conditions for their employees with limited physical factors affecting their work.

Table 3

Clusters for Job Difficulty/Physical Factors Dimension of Working Conditions

No.	Clusters	Job difficulty
C1	Austria, Malta, Estonia, Hungary, Croatia, Czech Republic, Ireland, United Kingdom, Slovenia	Medium to low
C2	Sweden, Poland, Greece, Lithuania, France, Spain, Slovak Republic, Finland, Latvia	Medium
C3	Luxembourg, Bulgaria, Belgium, Denmark, Germany, Netherlands, Italy, Cyprus, Portugal	Low
C4	Romania	High

Source: Authors' research.

The other considered dimension of the working conditions relates to the skills acquired by the employees through attending different training programs paid (PT) by their employers, as well as the career prospects of workers measured through the difficulty in finding a job (DIFJ).

The two questions addressed to this respect were: "Have you had training paid for by your employer (or self if self-employed) in the past year?" (PT) and "If I were to lose or quit my current job, it would be easy for me to find a job of similar salary?" (DIFJ).

T a b l e 4

Clusters Associated with the Paid Training Sub-component of Skills, Training and Career Prospects Dimension of Working Conditions

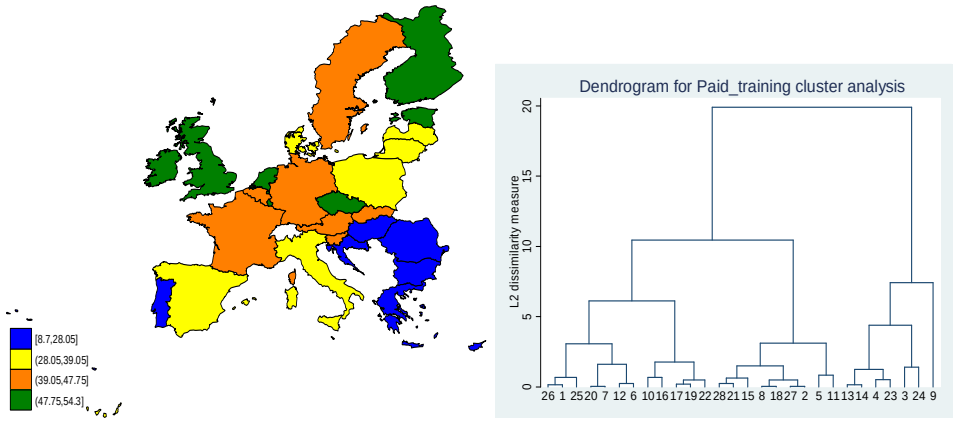
No.	Clusters	Paid training
C1	France, Slovenia, Sweden, Poland, Italy, Malta, Germany, Denmark, Spain, Latvia, Lithuania, Austria	Medium
C2	Estonia, Luxembourg, Finland, Netherlands, Slovak Republic, Ireland, United Kingdom, Belgium, Czech Republic	High
C3	Bulgaria, Romania, Cyprus, Hungary, Croatia, Portugal	Medium to low
C4	Greece	Low

Source: Authors' research.

The results obtained after processing the data collected by Eurofound, in terms of map, cluster forming and analysis, related to the employees attending training programs paid by their employers are represented by Figure 6 and synthesized in Table 4.

F i g u r e 6

Employees Attending Training Programs Paid by Their Employers within the EU-28 (left) and the Dendrogram for Cluster Analysis of this Job Quality Dimension (right)



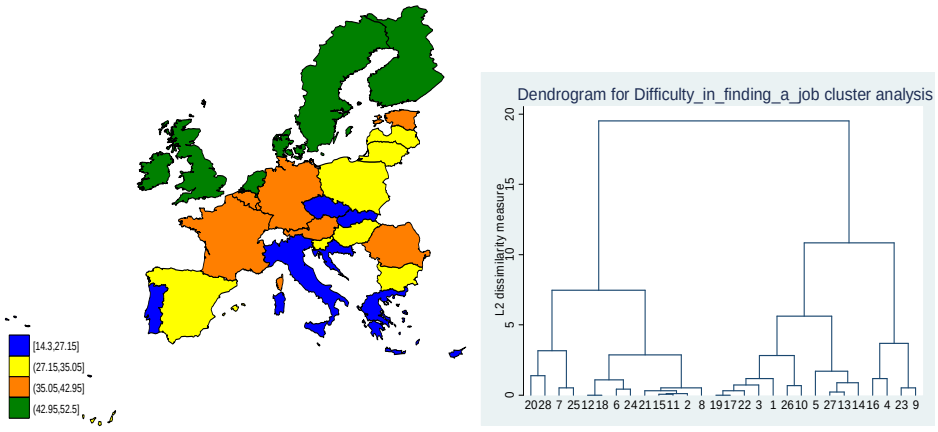
Source: Own process of panel data.

Within this job quality dimension we were also able to differentiate Greece's position (C4) in terms of low levels of training programs ensured and paid by the employers for their workers, with significant negative effects on labor productivity, firm's overall performance and labor market outcomes. Greece is well known at European level among the countries with high unemployment rates (both total and long-term as well as youth unemployment).

However, most of the EU MS tend to recently refocus their employment strategies on active labor market policies (ALPM), with a particular focus on developing skills and new abilities for workers through complex educational and training programs. These types of measures have significantly reduced the income and employment insecurity, thus improving career prospects for employees in various types of working arrangements. Nevertheless, there are still some European countries were the employees worry about not finding another job with a similar salary if they were to lose their current position in a certain period of time, mainly Greece, Cyprus, Italy or Portugal (C4), but also some countries in CEE (C3) (Figure 7 and Table 5).

F i g u r e 7

Future Career Prospects – the Difficulty in Finding a New Job by the EU-28 Employees (left) and the Dendrogram for Cluster Analysis of this Job Quality Dimension (right)



Source: Own process of panel data.

The Nordic States are well known for their labor market models and best practices at European level (namely the 'Danish model' of flexicurity) focused on balancing flexibility and security for a proper professional and personal development of employees and an adequate labor market insertion and integration (inclusion). Therefore, the results of such policies and accurate associated

measures have significant positive effects upon the wellbeing on the employees and the overall economic activity.

T a b l e 5

Clusters Associated with the Career Prospects Sub-component of Skills, Training and Career Prospects Dimension of Working Conditions

No.	Clusters	Difficulty in finding a job
C1	Sweden, Denmark, Malta, United Kingdom	Low
C2	Belgium, France, Luxembourg, Ireland, Romania, Estonia, Netherlands, Finland	Medium to low
C3	Slovak Republic, Hungary, Czech Republic, Austria, Lithuania, Bulgaria, Spain, Poland, Slovenia, Croatia, Latvia	Medium
C4	Portugal, Italy, Greece, Cyprus	High

Source: Authors' research.

Based on all these results, we can attest that there are significant variations between the EU MS in terms of the outcomes resulted on the three job quality indices considered, overall, the CEE countries having poor performances compared to the other MS, also reflected by low labor market outcomes, H1: *being validated*.

3.2. Flexicurity Impact Models

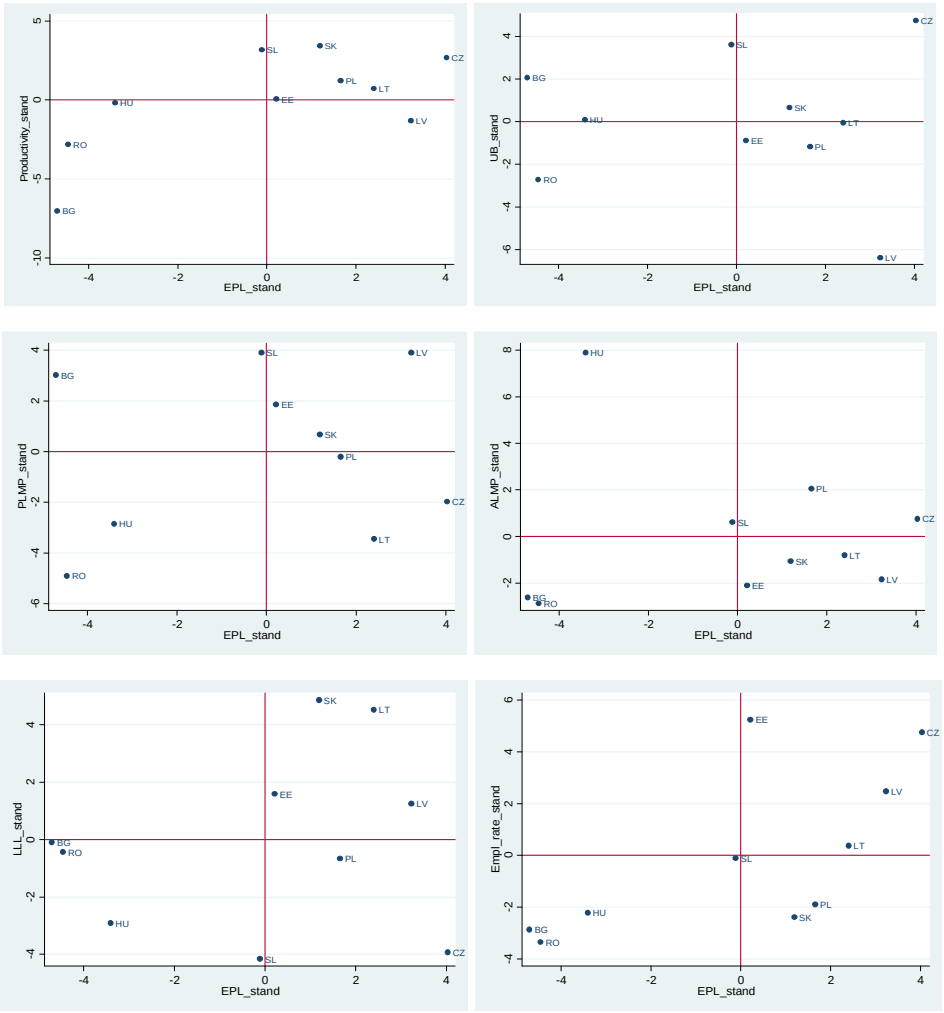
Since our cluster analysis has revealed that CEE countries have relatively poor performances in terms of the working conditions dimensions that are reflected by low labor market outcomes (H1), the research continues in order to assess the interdependencies between the basic coordinates of flexicurity models for ten EU MS in CEE and labor productivity per person employed (LP), with a further impact upon economic welfare and living standards (GDP per capita and at-risk--of-poverty rate). We have extracted ten CEE countries, New EU MS since 2004 and 2007, from the initial panel of EU-28, that were also considered in the previous section, but are now analyzed during a longer time period, respectively 2006 – 2015 (in order to better capture the effects and time variations) and a new set of flexibility and security indicators.

The scatter plots of flexicurity features and productivity reveal the negative situation of Romania, Hungary and Bulgaria (out of the other CEE countries also with poor labor market performances) that have relatively low levels of employment protection granted to workers with negative effects in terms of labor productivity and employment levels (Figure 8).

In order to obtain rigorous results, we have firstly tested the panel to see if it's stationary by using the Levin-Lin-Chu (LLC), Im-Pesaran-Shin, Harris-Tzavalis and Breitung unit-root tests (Appendix 1).

F i g u r e 8

Scatter Plots of Various Flexicurity Measures for the CEE Countries, 2015



Source: Authors' research.

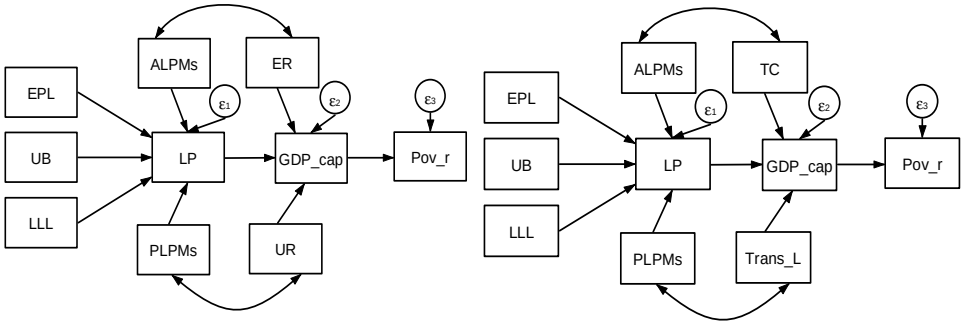
We've firstly followed the European Commission (2013) and Bekker (2018) flexicurity approach focused on five new coordinates included into EU strategies and developed a first SEM model using a proxy/indicator for each dimension, respectively: for the (i) "flexible and reliable labor contracts that promote job quality and smooth labor market transitions and avoid a two-tier labor market" – we have considered the EPL (employment protection legislation), TC (temporary contracts), Trans_L (transsition to a different job with the same/higher/lower wage level); for (ii) "comprehensive lifelong learning strategies" – we've used the LLL indicator; for (iii) "effective policies to help the unemployed re-enter

the labor market" – we've applied the ALMPs (active labour market policies); for (iv) "adequate and sustainable social protection systems that contribute effectively and efficiently throughout the life cycle both to social inclusion and labor market integration" – we've used PLMPs (passive labour market policies) and UB (unemployment benefits) separetely; for (v) "open and competitive product and services markets, reduce the tax wedge on labor, particularly on low-earners, in a budgetary-neutral way to foster job creation" – we've used the international trade, foreign investment and the employment rate (ER).

This SEM model further captures the impact of all these flexicurity and labour market measures/outcomes on workers' productivity and general economic welfare of CEE countries. The model is graphically represented by Figure 9 and detailed in Appendix 2 and Appendix 3.

Figure 9

SEM Design for Flexicurity-worker's Productivity and Economic Welfare Impact Models



Source: Authors' research.

The results obtained after processing the general SEM model in various combinations reveal that EPL is the most significant in positively influencing labor productivity (LP) of employees in CEE countries, the associated coefficients being positive and statistically significant (the coefficient is 10.00***). Thus, a tighter employment protection granted to workers could improve their working environment and wellbeing, with positive spillovers in terms of how they perform their job related tasks and subsequent benefits for the company and national economy.

The EPL covers the risks confronted by workers in terms of dismissals, thus including a set of requests that have to be respected by the employers when they dismiss their employees. These conditions define the legal framework for laying off, probations, notifications and all the necessary procedures that have to be performed in case of individual or collective dismissals, along with severance

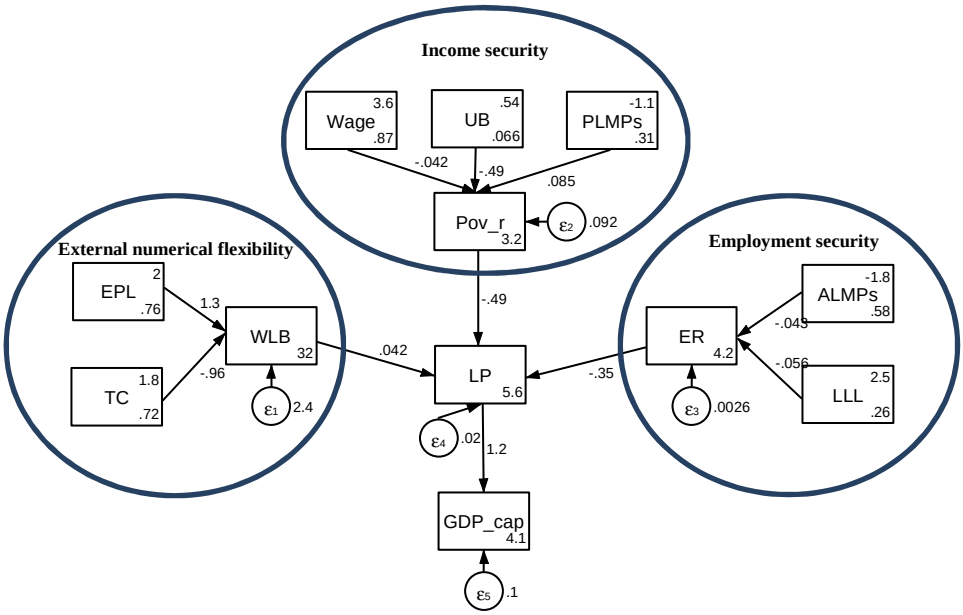
payments for early job terminations and the sanctions applied for unfair dismissals. Another flexicurity features considered in the model as part of the "golden triangle" with positive effects upon labor productivity are ALMPs and, in particular, LLL. In this case, even though the coefficients have a lower degree of statistical significance (11.01, respectively 0.0368), they are also positive and reflect a potential increase in employees' productivity in the framework of an active participation at various training and educational programs, aspects also revealed by the cluster analysis detailed in the previous section. On the other hand, unemployment benefits (UB) tend to reduce labor productivity (–3.689) hence they provide the necessary income for the period without a job, acting like a disincentive for ALMPs (employees know that even in case of losing their job they are income secured, thus deterring them from properly performing their tasks). However, the overall PLMPs that also capture early retirement benefits and income support programs during unemployment have a positive impact on labor productivity (11.01 coefficient). At the same time, if we consider the flexibility dimension of flexicurity captured within our developed SEM models through temporary contracts (TC), the results highlight that the overall economic impact of these flexible working arrangements is positive for CEE countries, inducing an increase in GDP per capita (1.699 coefficient) and a further reduction of poverty rate (Pov_r) (with a primary limitation induced by a low level of statistical significance for the estimated coefficients, –0.000180). Last but not least, there are other important variables influencing the economic output, and thus we considered international trade (Export, Import) and investment (FDI_i and FDI_o) in connection with the way in which employees can contribute to stimulating these activities with positive effects on GDP per capita, as attested by the coefficients associated with these variables (namely Import and FDI_o). The results of SEM models reveal that specific labor market policies and strategies aiming to improve employees' active participation and performance have positive effects on labor productivity and overall economic output in the case of CEE countries.

The second general SEM model (Figure 10) is more comprehensive and follows the approach of Muffels et al. (2010), Chung (2012) and Nardo and Rossetti (2013), thus clearly disentangling between the efforts performed nationally and by companies to ensure proper working conditions for employees with positive spillovers upon their wellbeing, and the final effects/flexicurity states induced by all these measures and furthermore on labour productivity, firm performance and aggregated economic welfare of CEE countries. Considering the flexicurity efforts, measured by external numerical flexibility component (EPL and TC), the impact is positive for EPL (1.3 coefficient), and negative for TC (–0.96 coefficient) upon external numerical flexibility effects, measured through

the duration of working life (WLB). Overall, the external numerical flexibility component induces favorable results on labour productivity (LP) (coefficient is 0.042). The income security effects measured by at-risk-of-poverty-rate (Pov_r) is negatively influenced by PLMPs (the positive estimated coefficient 0.085 reveals an increase in the poverty risk at a unit increase in passive expenditures), and positive by Wage (–0.042) and UB (–0.49), since an increase in wages/ earnings and maintaining a wage level even during the unemployment period significantly decreases the poverty risk (hence the negative estimated coefficients). Overall, the income security measures generate a decreasing in labour productivity (LP) (coefficient is –0.49), these measures acting like a disincentive for labour market participation. Also, the employment security outcomes revealed by the employment rate (ER), determine negative results on LP (–0.35), under a negative impact induced by ALMPs (–0.043) and LLL (–0.056). These final estimations highlight that the active labour market measures and educational programmes implemented by the CEE countries need to be reconfigured since they do not lead to positive employment and productivity outputs, a new tailored strategy in this respect being more than necessary to turn these credentials into positive ways to improve the labour market performance.

F i g u r e 10

SEM Design and Results of the New Flexicurity Model on a Two-fold Approach (flexicurity efforts and flexicurity states/effects)



Source: Authors' research.

Still, the results of the second SEM model point out that, as expected, the labor productivity (LP) has significant positive effects on the economic outcome/ welfare (GDP_cap) in the case of CEE countries (coefficient 1.2). Thus, the second hypothesis, H2: *There is a significant correlation (interdependence) between the flexicurity model coordinates (two models) and labor productivity/economic development for CEE countries, is fulfilled*.

Conclusions

Working conditions are essential for a proper professional development of employees in terms of productivity and organizational learning, being key determinants of firm performance and general economic outcomes. The environment of different workplaces varies significantly across countries in the context of the globalization process. Also, as implications of the 2008 economic crisis, the EU has focused its employment strategies on several dimensions of job quality for an adequate labor market insertion of employees according to different types of contractual arrangements, with advantages both for employees and employers, acording to „matching" model (Pissarides, 2010), which explains the differences among European labor markets on the long-run.

The results obtained for the first aim of our analysis revealed important differences among the EU MS, some countries enjoying flexibility and various schemes of training programs, while others are still struggling with difficult working conditions in terms of associated physical factors affecting the work performed by the employees and not so favorable career prospects with further differentiated output impacts. Therefore, the European labor market policies should target a comprehensive assessment framework of the specific ways in which various measures adopted to improve the working conditions actually lead to productivity increases and general positive output results, since job quality is a core element used to boost economic growth towards the objectives set within the framework of Europe 2020 agenda and "The new Skills Agenda for Europe Strategy".

For the second aim, the flexicurity measures upon labor productivity and economic welfare measured through the GDP per capita and by the at-risk-of-poverty rate, we have designed two models: the first model based on European Commission (2013) and Bekker (2018) approaches on five new coordinates included into EU strategies; the second model, based on Chung (2012) and Nardo and Rosetti (2013), for the flexicurity efforts and effects, having three components (external numerical flexibility, Income security, and Employment security. Both models proved that there is a significant interdependence between the flexicurity model coordinates and labor productivity/economic development for CEE

countries (H2) that means also that the GDP can equally cause the growth (improvement) of the working conditions and flexicurity variables.

Therefore, decision makers should consider a re-centering of their employment strategies in line with Europe 2020 and Project Europe 2030 guidelines aiming to grant a smart, sustainable and inclusive growth for the EU MS. A specific attention should be given to the employment protection legislation (EPL) and other external flexibility measures, the current research bringing evidence to attest that these components have an important positive impact upon labour productivity, economic development and welfare. Moreover, a reconsideration of labour market policies (both active and passive, as well as overall flexicurity strategies), along with new tailored educational programs need to be taken into account by CEE policy responsible and decision makers, since our results reveal that many of these measures don't accomplish their final goals to increase labour productivity, employment outcomes and general economic welfare.

Our research is not without limitations, mainly related to a relatively small number of observations used for the empirical analysis and, in some cases, a lower degree of statistical significance for the estimated coefficients. However, the research endeavor provides a general framework of analysis for the particular dimensions of the working conditions and associated coordinates that have important positive effects on labor productivity, with benefic spillovers on the overall economic output for EU MS and, in particular, for CEE countries. A further development of the current research is considered in order to expand the analysis to a larger panel and to include other working conditions features that might also be essential for employees' wellbeing, leading to increased productivity, firm performance and national economic growth.

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Appendices

Appendix 1

Unit-root Tests for SEM Modelling in the CEE Sample

Resid		
LLC (Levin-Lin-Chu)	p-value t-statistic	0.0001 –3.8297
	ADF regressions: 1 lag; Time trend included LR variance: Bartlett kernel, 6.00 lags average	
Im-Pesaran-Shin	p-value t-statistic Test critical values: 1% 5% 10%	0.1209 –1.170 –3.030 –2.740 –2.590
	ADF regressions: No lags included AR parameter: Panel-specific; Time trend included	
Harris-Tzavalis	p-value Statistic Z	0.8990 0.5191 1.2759
Fisher-type Based on augmented Dickey-Fuller tests	p-value Inverse chi-squared (20) Modified inv. chi-squared	0.1667 25.9754 0.9448
Ho: (All) Panels contain unit roots Ha: Panels are stationary/ At least one panel is stationary		

Source: Authors' research.

Appendix 2

Results of SEM Models, MLE Method

	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
LP->				
EPL	10.00***	10.00***	10.00***	10.00***
	(1.051)	(1.051)	(1.051)	(1.051)
UB	–3.689	–3.689	–3.689	–3.689
	(5.227)	(5.227)	(5.227)	(5.227)
LLL	0.0368	0.0368	0.0368	0.0368
	(0.0385)	(0.0385)	(0.0385)	(0.0385)
ALPMs	11.01	11.01	11.01	11.01
	(5.703)	(5.703)	(5.703)	(5.703)
PLPMs	4.840	4.840	4.840	4.840
	(6.197)	(6.197)	(6.197)	(6.197)
_cons	42.49***	42.49***	42.49***	42.49***
	(3.030)	(3.030)	(3.030)	(3.030)
GDP_cap->				
LP	188.1***	167.5***	147.0***	195.2***
	(23.25)	(24.06)	(20.84)	(25.33)
ER		204.8*		
		(88.35)		
UR		–200.8*		
		(98.21)		
Export			–0.0383***	
			(0.00930)	
FDI_i			–62.95***	
			(11.93)	
Import			0.00794	
			(0.00863)	
FDI_o			188.4***	
			(30.36)	
TC				1.699
				(41.35)
Trans_L				107.1
				(67.36)
_cons	–2 728.2	–15 995.6**	3 386.2*	–4 684.7*
	(1 567.9)	(5 669.2)	(1 581.6)	(2 020.9)
Pov_r				
GDP_cap	–0.000180	–0.000180	–0.000180	–0.000180
	(0.000121)	(0.000121)	(0.000121)	(0.000121)
_cons	17.52***	17.52***	17.52***	17.52***
	(1.260)	(1.260)	(1.260)	(1.260)
N	100	100	100	100

Note: Standard errors in parentheses; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Authors' research.

Appendix 3

Results of SEM Models – Detailed, MLE Method

	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
LP->				
EPL	10.00***	10.00***	10.00***	10.00***
	(1.051)	(1.051)	(1.051)	(1.051)
UB	–3.689	–3.689	–3.689	–3.689
	(5.227)	(5.227)	(5.227)	(5.227)
LLL	0.0368	0.0368	0.0368	0.0368
	(0.0385)	(0.0385)	(0.0385)	(0.0385)
ALPMs	11.01	11.01	11.01	11.01
	(5.703)	(5.703)	(5.703)	(5.703)
PLPMs	4.840	4.840	4.840	4.840
	(6.197)	(6.197)	(6.197)	(6.197)
_cons	42.49***	42.49***	42.49***	42.49***
	(3.030)	(3.030)	(3.030)	(3.030)
GDP_cap->				
LP	188.1***	167.5***	147.0***	195.2***
	(23.25)	(24.06)	(20.84)	(25.33)
ER		204.8*		
		(88.35)		
UR		–200.8*		
		(98.21)		
Export			–0.0383***	
			(0.00930)	
FDI_i			–62.95***	
			(11.93)	
Import			0.00794	
			(0.00863)	
FDI_o			188.4***	
			(30.36)	
TC				1.699
				(41.35)
Trans_L				107.1
				(67.36)
_cons	–2 728.2	–15 995.6**	3386.2*	–4684.7*
	(1 567.9)	(5 669.2)	(1581.6)	(2020.9)
Pov_r				
GDP_cap	–0.000180	–0.000180	–0.000180	–0.000180
	(0.000121)	(0.000121)	(0.000121)	(0.000121)
_cons	17.52***	17.52***	17.52***	17.52***
	(1.260)	(1.260)	(1.260)	(1.260)
var(e.LP)				
_cons	75.69***	75.69***	75.69***	75.69***
	(10.70)	(10.70)	(10.70)	(10.70)
var(e.GDP_cap)				
_cons	8 551 651.4***	8 037 922.9***	3 968 409.5***	8 330 684.8***
	(1 209 386.1)	(1 136 734.0)	(561 217.9)	(1 178 136.7)
var(e.Pov_r)				
_cons	20.62***	20.62***	20.62***	20.62***
	(2.916)	(2.916)	(2.916)	(2.916)
mean(EPL)				
_cons		1.975***		1.975***
		(0.0877)		(0.0877)
mean(UB)				
_cons		0.501***		0.501***
		(0.0257)		(0.0257)

mean(LLL) _cons		43.20*** (2.444)		43.20*** (2.444)
mean(ALPMs) _cons		0.222*** (0.0162)		0.222*** (0.0162)
mean(PLPMs) _cons		0.378*** (0.0212)		0.378*** (0.0212)
mean(ER) _cons		62.27*** (0.388)		
mean(UR) _cons		9.353*** (0.335)		
var(EPL) _cons		0.769*** (0.109)		0.769*** (0.109)
var(UB) _cons		0.0659*** (0.00932)		0.0659*** (0.00932)
var(LLL) _cons		597.3*** (84.47)		597.3*** (84.47)
var(ALPMs) _cons		0.0262*** (0.00371)		0.0262*** (0.00371)
var(PLPMs) _cons		0.0451*** (0.00638)		0.0451*** (0.00638)
var(ER) _cons		15.02*** (2.124)		
var(UR) _cons		11.24*** (1.590)		
cov(EPL,UB) _cons		0.0663** (0.0235)		0.0663** (0.0235)
cov(EPL,LLL) _cons		2.351 (2.155)		2.351 (2.155)
cov(EPL,ALPMs) _cons		0.00910 (0.0142)		0.00910 (0.0142)
cov(EPL,PLPMs) _cons		0.0298 (0.0189)		0.0298 (0.0189)
cov(EPL,ER) _cons		1.550*** (0.373)		
cov(EPL,UR) _cons		0.177 (0.294)		
cov(UB,LLL) _cons		0.165 (0.628)		0.165 (0.628)
cov(UB,ALPMs) _cons		0.00978* (0.00427)		0.00978* (0.00427)

cov(UB,PLPMs) _cons		0.0394*** (0.00672)		0.0394*** (0.00672)
cov(UB,ER) _cons		–0.272** (0.103)		
cov(UB,UR) _cons		0.407*** (0.0952)		
cov(LLL,ALPMs) _cons		–0.890* (0.406)		–0.890* (0.406)
cov(LLL,PLPMs) _cons		1.068* (0.530)		1.068* (0.530)
cov(LLL,ER) _cons		3.621 (9.477)		
cov(LLL,UR) _cons		34.96*** (8.908)		
cov(ALPMs,PLPMs) _cons		0.00549 (0.00348)		0.00549 (0.00348)
cov(ALPMs,ER) _cons		–0.243*** (0.0673)		
cov(ALPMs,UR) _cons		0.104 (0.0553)		
cov(PLPMs,ER) _cons		–0.190* (0.0845)		
cov(PLPMs,UR) _cons		0.373*** (0.0804)		
cov(ER,UR) _cons		–6.107*** (1.436)		
mean(TC) _cons				8.490*** (0.760)
mean(Trans_L) _cons				13.69*** (0.445)
var(TC) _cons				57.69*** (8.158)
var(Trans_L) _cons				19.83*** (2.805)
cov(EPL,TC) _cons				1.788** (0.689)
cov(EPL,Trans_L) _cons				–0.111 (0.391)
cov(UB,TC) _cons				0.142 (0.196)

cov(UB,Trans_L) _cons				0.362** (0.120)
cov(LLL,TC) _cons				–61.43** (19.55)
cov(LLL,Trans_L) _cons				–0.0568 (10.88)
cov(ALPMs,TC) _cons				0.689*** (0.141)
cov(ALPMs,Trans_L) _cons				0.267*** (0.0769)
cov(PLPMs,TC) _cons				0.258 (0.163)
cov(PLPMs,Trans_L) _cons				0.289** (0.0989)
cov(TC,Trans_L) _cons				3.560 (3.401)
N	100	100	100	100

Note: Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Authors' research.