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## Article

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## Factors of the Shadow Economy in the Republic of Albania

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**Abstract:** The shadow economy has been of interest to macro policy makers in today's world. The shadow economy may erode significantly a country's tax and social security base by effecting negatively the provision of public services. The objective of this study is to contribute to the current literature on the factors of the shadow economy, respectively by focusing in the Republic of Albania. In order to achieve this objective, the authors used multiple variable linear regression. The study provides results and tests hypotheses about effect of tax burden, government effectiveness and rule of law on the shadow economy. Comparing with other studies, our study found out that not adequate of legal environment has positive impact on shadow economy. Same with other studies, this study found out that tax burden and government effectiveness have negative impact in shadow economy. The key contribution of the study is that it provides results about the factors of shadow economy which is important for policy makers, strategists and academics.

**Keywords:** Shadow economy; GDP; tax burden; government effectiveness; rule of law

**JEL Classification:** C39; C82; D73; E26; H26;

### 1. Introduction

The shadow economy has become a subject of considerable academic interest only since the beginning of the 1970s (Manolas et al., 2013).

In literature there are a number of definitions of the shadow economy, but a commonly used definition is that *"all economic activities that contribute to the officially GDP but unregistered in macroeconomic statistics"* (Schneider, 1994a).

Experts and policy makers have to be focused in this problem, because of the impact of this phenomenon in the economy of the country and its macroeconomic variables. Indicators such as income, unemployment, consumption are unreliable when there is underground economy in a country, which makes policies based on these indicators potentially less effective (Schneider & Enste, 2000).

Informal economy and corruption have negative and significant effect on economic growth (Hetemi, Gulhan et al., 2018).

Albania left Communism at the beginning of 1990's. This system had negative impact in the country's economy as such the shadow economy grew up, this was as result of lack of state structures and law. Some of the factors of shadow economy in Albania are as follows: corruption, tax evasion, unregulated labour market, non-declaration of income.

By analysing from historical perspective, Albania changed its political system from a socialism centralized economy into market economy and these changes took place since 1990. The changes at '90s in Albania brought radical changes in the political, economic, and social sphere. System changes was accompanied besides other by some negative phenomenon (Muca et al., 2015).

The informal economy in Albania was first appeared during the transition phase of the centralized economy to the market economy, because in this period, the development of the regulatory, legal, institutional and fiscal framework remained far behind in comparison with the development of free

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enterprise. According to official statistics in Albania the informal economy currently is about 33 percent of GDP (Fortuzi, 2015).

The shadow economy is a serious problem in Albania by being the one of serious factors which may impact economic growth and political development. By fighting this phenomenon the country will help itself for the integration in European Union.

Gërzhani (1998) argues that the crisis years of 1990-1992 were crucial to the shadow economy phenomenon. Regime changes in Albania over 1991-1992 were accompanied by the absence of a regulatory framework for the normal functioning of an open market economy. This created favourable conditions for an informal culture of doing business, without rules and control (Toska & Torluccio, 2013).

The shadow economy rate as a percentage of GDP still remains high in Albania. Based on the study of Schneider and Medina (2017) this rate was 26.21% of GDP in 2015. Factors that may impact the shadow economy are related to policy instability, crime and corruption, rule of law, government effectiveness, tax burden as well as regulatory burden.

There are theories that consider tax burden as the main factor of the shadow economy and another theory that take into account factors such regulatory burden, quality of regulatory, corruption and environment.

The hypotheses of our paper are as follows:

- Tax burden impacts the shadow economy and stimulate economic agents to perform their business activities through the shadow economy.
- Government effectiveness and rule of law influence the shadow economy.

This paper is built based on earlier studies of Johnson et al. (1998), Friedman et al. (2000), Krakowski (2005), Sevgin (2009) who found evidence for supporting their hypothesis or different results with their conclusions.

Paper is organized as follows: Theoretical and empirical literature review is discussed in section 2. Methodology and Conceptual Framework is included in section 3. Section 4 includes statistics related to the dataset and results of multiple variable linear regression. This section includes also discussion. Section 5 concludes the study. Section 6 includes references.

## 2. Literature Review

While reviewing the literature in the indicators of shadow economy, main important studies are Friedman (2000), Krakowski (2005), Johnson et al. (1998) and Sevgin (2009). A study with a larger scope was conducted by Schneider and Medina, 2017, who evaluated 158 countries across the world, by using the DYMIMIC method (multiple dynamic causes, multiple causes). According to their study the size of the shadow economy of Albania in 2015 was 26.21% of country's GDP.

According to the study of Toska and Torluccio (2013) informality level in Albania marked its highest value in 1994, about 68.10% of GDP. As per their study, in average, for the period 1996 – 2012 the informal economy is estimated about 37.10% of country's GDP.

According to Sevgin (2009) the effects of shadow economy appear simultaneously in the production, labour and money market. An indicator of the shadow economy is considered the discrepancy between national income and spending, discrepancy between official and actual labour force. Sevgin (2009) considered that indicators of the shadow economy are: tax burden, corruption, and regulatory burden, rule of law, income inequality and GNI per capita. The results of its study suggested that tax and regulatory burden have a negative and significant effect on the shadow economy. The quality of legal environment has a positive significant influence on the shadow economy.

The shadow economy comprises all output that goes unreported and therefore is “hidden” from income tax (Manolas et al., 2013).

As per the method of cash-in hand demand an increase of any amount, that cannot be economically justified (it is not rational from economic perspective) are attributed to the shadow economy (Schneider & Enste, 2000).

Johnson et al. (1998) has explained the correlation between the shadow economy and regulation, bureaucracy, tax burden, corruption, legal environment. In their study they suggested that these factors have a positive correlation with shadow economy.

Friedman et al., 2000 studied the role of institutions on the shadow economy. In their study they suggested that poor institutions (corrupted, overregulated, and with not adequate legal environment) are positively correlated with the shadow economy.

La Porta et al. (1999) found out that there is a causal connection between the poor institutions and shadow economy, indicating that the poorer the institutions, the higher the shadow economy.

Krakowski (2005) analysed the factors of the shadow economy by using regressions between countries. His results suggested that the intensity of regulations (regulatory burden) is the most important factor in explaining the size of shadow economy. In order to impact the shadow economy, efforts should be focused on the following topics: improvement and modernization of a legal institutional framework, improvement and creation of a favourable business climate, reduction of bureaucracies, accountability and transparency of legal institutions, property rights protection, further financial development, a flexible and effective system of taxation and social and health insurance contribution system and improvement of statistical systems (Gërxhani, 1997).

Reforms carried out in Albania during 2007 brought a reduction in the number of steps to be taken from ten to five for starting a business, the period from 2008 to 2011. With recent changes, the law on chambers of trade and industry has been amended, by removing the obligation of companies to be registered in this institution (Toska & Torluccio, 2013).

### 3. Methodology Research, Source of Data and Conceptual Framework

For the purpose of the paper, data ranging from 1996 to 2015 was used. The paper includes 20 years (with focus to the Republic of Albania). The data is obtained from databases of reputable international institutions.

In order to define factors of the shadow economy, there have been considered several factors and two hypotheses have been provided:

- Increase of tax burden increases shadow economy in a country;
- Regulatory burden, legal environment, regulatory quality and government effectiveness are determining factors of the size of shadow economy.

The model is built as follows:

$$SE = \beta_0 + \beta_1 TB + \beta_2 GE + \beta_3 RL + \varepsilon \quad (1)$$

The source of data and details about variables used is provided in the Table 1.

**Table 1. Variables used in the model**

Variable name	Acronym	Variable type	Expected effect	Source of data
Shadow economy	SE	Dependent		Schneider and Medina
Tax Burden	TB	Independent	+	Heritage Foundation Index
Government Effectiveness	GE	Independent	-	World Bank
Rule of Law	RL	Independent	-	World Bank

*Source: Authors' compilation*

The dependent variable in this paper is the shadow economy expressed in percentage of the country's GDP.

During the construction of the model, a range of independent variables are considered as having an effect in shadow economy.

Tax burden as an independent variable is expected to be one of the variables with the highest effect in shadow economy. An increase of the tax burden may increase the shadow economy, because market players are given incentives not to declare their income. They are stimulated to operate in shadow economy and not to declare their income and pay higher taxes. A positive correlation is expected between these two variables.

Overregulation is another factor mentioned as having created the shadow economy (according to Friedman, 2000; Krakowski, 2005). Overregulation has its own effects on increasing expenses which stimulates economic agents to operate in the informal economy. The expectation is that there is a positive correlation between overregulation and shadow economy.

The rule of law is also an important factor that has an impact in the economy and as such the expectations are that there would be a negative correlation with shadow economy. If the rule of law is equal for all economic agents, it stimulates these market players to stay within the formal economy. The rule of law assures economic agents by protecting them about their legitimate actions which are reported properly to the tax administration.

A crucial factor to a country's economy is the government effectiveness, which refers to the governance of a certain country to offer a safe business environment and based on policies that stimulate economic agents to operate in a formal economy. Therefore, expectations are that government effectiveness and shadow economy would have a negative correlation.

#### 4. Results of the Model and Discussion

In this chapter data structure will be presented which includes results of the model and discussion. The multiple linear regression is used to obtain results presented in this study.

Based on results of the linear regression there is negative correlation between the dependent variable (SE) and independent variables which are TB, GE and RL.

$$SE = C - 0.260 * TB - 0.314 * GE - 0.003 * RL$$

Table 2 presents results about multiple variable linear regression. According to the model Tax Burden (TB), contrary to expectations, has a negative and significant effect on the shadow economy. Based on these results and hypotheses of our paper, which was that high tax burden causes the shadow economy to increase, is rejected. In terms of the magnitude of the effect of tax burden, it is possible to say that the effect is moderate. The output of our paper is consistent with the past literature. If we refer to Krakowski (2005) he found a significant and negative correlation between tax rates and the shadow economy. The same result is found by Sevgin (2009). Friedman et al. (2000) found out that tax burden and shadow economy has negative correlation but not significant. Whereas Johnson et al. (1998) found a positive correlation between tax burden and the shadow economy.

Government effectiveness (GE) has negative correlation with a high significance with shadow economy which means an increase of government effectiveness will decrease shadow economy. The sign of the correlation indicates that as the Government effectiveness increases the shadow economy decreases, which is in line with our hypothesis.

The shadow economy seems to increase as the index for rule of law goes up. Since higher scores mean better legal environment, we see a negative, but not statistically significant correlation between rule of law and the shadow economy. The rule of law has negative effect in shadow economy, however the significance is not as expected since strong legal environment create incentive for businesses to be involved in formal economy.

**Table 2. Multiple variable Linear Regression results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TB	-0.260	0.135	-1.936	0.071
GE	-0.315	0.094	-3.364	0.004
RL	-0.003	0.119	-0.028	0.978
C	65.092	9.415	6.913	0.0000

*Source: Authors' compilation*

The table 3 shows the multiple linear regression model summary and overall fit statistics. It is found out that the adjusted  $R^2$  of our model is .886 with the  $R^2 = .904$ . This means that the linear regression explains 90.40% of the variance in the data. The Durbin-Watson  $d = 1.145$ , which is between the two critical values of  $1.1 < d < 2.5$ . Therefore, we can assume that there is no first order linear autocorrelation in our multiple linear regression data.

**Table 3. Model summary and overall fit statistics**

R-squared	0.904	Mean dependent var	30.798
Adjusted R-squared	0.886	S.D. dependent var	4.668
S.E. of regression	1.576	Akaike info criterion	3.925
Sum squared resid	39.743	Schwarz criterion	4.124
Log likelihood	-35.246	Hannan-Quinn criter.	3.964
F-statistic	50.230	Durbin-Watson stat	1.145
Prob(F-statistic)	0.00000		

*Source: Authors' compilation*

## 5. Conclusion

The interest for shadow economy and efforts to understand its causes and effects has grown during the last years. Shadow economy can damage the country's tax base, by damaging therefore the government's budget, which has its further influence the necessary provision of public services. Moreover, the shadow economy has negative impact on tax revenues and poor competition in the private sector.

Based on the past literature, there is group of studies that analyse the causes of shadow economy and another group which is focused more in the size of the shadow economy. Our study analyses the factors of shadow economy, which includes tax burden, government effectiveness and rule of law.

The study suggests that government effectiveness is the main factor which influences the shadow economy. Government effectiveness stimulates economic agents to be formalized and included into the formal economy.

The effect of tax burden on shadow economy was in line with past literature (was negative and significant). In some countries with a higher tax burden, they also have smaller shadow economy and this suggests that lowering tax rates cannot be an effective policy in the fight against shadow economy in all countries and as such the same approach cannot be applied to all countries.

Rule of law has negative effect on shadow economy, however in our case it was not statistically significant.

The study indicates that government effectiveness and rule of law would be the most effective policy to impact shadow economy. This policy requires specific actions, but it takes time to enforce government effectiveness and rule of law. Rule of law must be strengthened in order to fight against shadow economy.

As conclusion, the study states that the government effectiveness and rule of law have negative and substantial effect on the size of shadow economy. The study supports the theory to strength government effectiveness, modernizing the fiscal administration, legislative improvements, and higher credibility and commitment of the institutions in order to stimulate economic agents to stay in

formal economy. However, the study does not support the theory that an increase in tax burden stimulates people to stay in the shadow economy to avoid taxes.

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