

THE EFFECT OF GOVERNMENT EFFECTIVENESS AND RULE OF LAW ON ECONOMIC GROWTH: THE CASE OF EUROPEAN UNION TRANSITION ECONOMIES

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ABSTRACT

Government effectiveness can be effective on the country's economy through the political decision-making process and institutions. Legalization along with political decision-making process and institutions is also important for the countries. In a similar vein, the rule of law which is also important in terms of obeying the rules, may have effects on economy because of legal transactions. Therefore, it is important to analyse the impact of the government effectiveness and the rule of law on the economy. With this study, the effect of government effectiveness and rule of law on economic growth for European Union Transition Economies is investigated by using panel data method over the period of 2002-2018. According to the results, it is concluded that government effectiveness has positive effect on economic growth, but the rule of law has no statistically significant effect on economic growth. Moreover, the results indicate unidirectional causality runs from government effectiveness to economic growth and bidirectional causality from the rule of law and economic growth.

Keywords: *Institutional Factors, Government Effectiveness, Governance, Rule of Law, Economic Growth, Transition Economies.*

JEL Codes: *H10, K4, O4*

HÜKÜMET ETKİNLİĞİ VE HUKUKUN ÜSTÜNLÜĞÜNÜN EKONOMİK BÜYÜME ÜZERİNDEKİ ETKİSİ: AVRUPA BİRLİĞİ GEÇİŞ EKONOMİLERİ ÖRNEĞİ

ÖZ

Hükümet etkinliği, ülke ekonomisi üzerinde politik karar alma süreci ve kurumlar aracılığıyla etkili olabilmektedir. Politik karar alma süreci ve kurumlar ile birlikte yasallaşma da ülke ekonomisi açısından önem taşımaktadır. Kurallara uyma açısından önemli olan hukukun üstünlüğü, ekonomi üzerinde işlemlerin yasal olması nedeniyle etkiler oluşturabilmektedir. Bu nedenle hükümet etkinliği ile hukukun üstünlüğünün ekonomi üzerindeki etkisini incelemek önem arz etmektedir. Bu çalışmada panel veri analizi yöntemi kullanılarak 2002-2018 yılları arasında Avrupa Birliği geçiş ekonomilerinde (11 ülkede) hükümet etkinliği ile hukukun üstünlüğünün ekonomik büyüme üzerindeki etkisi incelenmiştir. Yapılan çalışma sonucunda, hükümet etkinliğinin ekonomik büyümeyi pozitif, hukukun üstünlüğünün ise ekonomik büyüme üzerinde istatistiksel olarak anlamlı bir etkisinin olmadığı tespit edilmiştir. Ayrıca hükümet etkinliğinden ekonomik büyümeye doğru tek yönlü, hukukun üstünlüğü ile ekonomik büyüme arasında çift yönlü nedensellik ilişkisi tespit edilmiştir.

Anahtar Kelimeler: *Kurumsal Faktörler, Hükümet Etkinliği, Hukukun Üstünlüğü, Ekonomik Büyüme, Geçiş Ekonomileri.*

JEL Kodları: *H10, K4, O4*

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INTRODUCTION

Along with the formation of societies after the coexistence of individuals states and also rules for the relations in communities were needed. Today governments are competent authorities in policy-making and decision-making process and this process is conducted via institutions. Another issue that is considered in decision-making process is economy. In other words, policy-making and decision-making process of countries may lead to various effects on also country's economies. In countries obeying the rules is another issue that is as important as institutions. In addition to obeying the rules, legality becomes important and this is important for the transactions to be registered. Moreover, legality is also important in terms of institutionalization and operation of institutions. For such reasons, obeying the rules may be effective on country's economies. The existence of legality in the countries increases the number of registered transactions and decreases the informal economy.

Government effectiveness and rule of law data (World Bank, 2020a; 2020b) among the World Governance Indicators present significant information in this issue. Government effectiveness and rule of law may lead to effects on economies as in other fields. Therefore, it is important to analyse the effect of government effectiveness and rule of law on economic growth. With this respect, this relationship is investigated in European Union transition economies (11 countries) for the period of 2002-2018 by using panel data analysis method. Firstly, theoretical knowledge about variables were given so that the issue could be better understood. Then, literature review of the studies on the relationship between the variables was conducted. After that, information was given about the tests used in the econometrical analysis and the results were presented and discussed. Finally, the evaluations on the results were included and recommendations were presented.

THEORETICAL FRAMEWORK AND REVIEW OF THE LITERATURE

Economy literature is generally based on "free market". Free market comes from an economic model which excludes all external rules and regards them as harmful for market performance. Actually, there is no market which is not based on rules of exchange (Ollila, 2009, p.18). Therefore, this perspective made the concept of "institution" an important matter. According to North (1990), one of the leading names of New Institutional Economics, institutions are the rules of the games in a society or more officially they are human created limitations to shape the human interaction. Institutional change shapes the way that societies evolve over the time and therefore, it is important to understanding the historical change.

Institutional Economics which was established in 19th century as a reaction to Neoclassical Economics in general is divided into two as "Old Institutional Economics" and "New Institutional Economics". The intellectual fundamentals of Old Institutional Economics were laid by Thorstein B. Veblen, John Rogers Commons and Wesley Clair Mitchell (Kama, 2011, p.187; Aktan and Vural, 2005, p.11). John K. Galbraith, Ronald Coase, Mancur Olson, Oliver Williamson, Douglas North are among the representatives

of New Institutional Economics School. In institutional economics, the importance of institutions in economic life is emphasized and the operation of economic life is based on laws, customs, traditions and habits and it was suggested that economic activities should be directed by institutions. According to institutional economists, the concept of institution refers to consistent behaviours, styles and norms that come from the past and lead people to the future on contrary to its word meaning. As also stated by Veblen, the concept of institution expresses the habits of thought (Aktan and Vural, 2005, p.11).

Institutions are humanly designed limitations that shape political, economic and social interactions. They come out of both informal limitations (sanctions, traditions, customs, taboos, code of conduct) and formal rules (laws, constitutions, property rights). They define the set of selection with the standard economics limitations and for that reason they identify the transaction and production costs and therefore the profitability and feasibility of economic activities (North, 1991, p.97). In order to reach the development goals, the sections implementing the economic, social and environmental policies, ministries, groups or governments are as important as the policies themselves. There are examples indicating that developing countries which began the Millennium Development Goals with good policies and institutions, are more successful to reach these goals (United Nations, 2016).

As a result of the fact that the income differences between the industrialized countries and others began to get bigger gradually since 19th century, the search for solutions about how these differences will be closed began. As the reasons for these economic growth differences the fields such as human and real capitals, saving rates and agriculture were generally focused, however; the role of institutions to explain these differences was ignored (Dumludağ, 2014, p.15). Acemoglu and Robinson (2010) analysed the role of institutions in growth and development identified that the main determiners of the differences among countries were the differences in economic institutions. The institutional differences among countries initially determine the results of different collective selections. Therefore, these selections reflect the differences in political institutions and different distributions of political power (Acemoğlu and Robinson, 2010, p.28).

In addition, in "Public Expenditures in a Simple Endogenous Growth Model" study by Barro (1990), one of the endogenous growth models, it was suggested that public expenditures on productive fields would affect the economic growth positively and goods and products provided by public sector were considered as the inputs for private sector. According to this study, a state may increase the efficiency of private enterprise by extending R&D activities, transferring technologies, preserving property rights, reinforcing communication networks and reducing the transaction costs (Erdoğan and Canbay, 2016, p.37).

Economic performance of a country depends on the quality of economic, political, legal and institutions along with various aspects of government policies. It was empirically proved that institutions were among the most important determiners of the differences in economic growth and investment rates among countries. In other words, main reforms that develop institutions may provide one of the best ways to prosper a country from poverty in long term (Barro, 2000, p.31). The issue of good governance

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which is often stated in governance literature and politic discussions grounds on the importance of management capacity which is necessary to provide the efficiency of markets. If states provide efficient markets (especially the implementation of property rights, the rule of law, decreasing corruption and promising to socialize it), it is assumed that private investors will promote the economic development (Khan, 2007, p.2).

As well as there are studies resulting that government effectiveness level and/or institutional structure/political institutions or economic independence level have a positive effect on economic performance in empirical studies analysing whether government effectiveness level or the policies implemented by governments have an effect on macroeconomic variables [See. Knack and Keefer (1995), Barro (1996), Chong and Calderon (2000), Acemoglu, Johnson and Robinson (2001), Grogan and Moers (2001), Dawson (2003), Glaeser, La Porta, Lopez-de-Silanes and Shleifer (2004), Law and Bany-Ariffin (2008), Justesen (2008), Lee and Kim (2009), Acemoglu and Robinson (2010), Mehanna, Yazbeck and Sarriedine (2010), Fayissa and Nsiah (2013), Alam, Kitenge and Bedane (2017), Güney (2017), Huang and Ho (2017)]. Moreover, there are studies resulting that this positive effect should be treated with caution [See. Quibria (2006), Kurtz and Schrank (2007)].

Knack and Keefer (1995) analysed the relationship between institutional and political structure and economic growth in 97 countries in the period between 1972 and 1989. The focus of this study is on the analysis of how economic growth is affected by the institutional indicators calculated by the two private institutions. Within the international investment risk guide, international country risk guide and environmental business risk intelligence report were investigated in the study. The relationship between institutional and political variables and economic growth was analysed with regression method. Also, Barro's (1991) study on the determiners of economic growth was investigated. It was concluded that political regulations had a positive effect on economic growth. In Barro's (1996) study covering the period between 1960 and 1990 and including 100 countries around the world main determiners of the economic growth was analysed through panel regression method within Neo Classical growth model. Public consumption, the rule of law, political liberty and political rights, democracy, standards of life, etc. were among the variables in the study. In the study it was concluded that expenditure levels of governments, political rights and liberty affected the economic growth positively. In addition, it was concluded that standard of life had a strong and positive effect on economic growth on contrary to the weak effect of democracy on economic growth.

The relationship between institutional factors and economic growth for 55 countries in the period between 1972 and 1995 was analysed through Granger causality test utilizing Chong and Calderon's (2000) and Knack and Keefer's (1995) studies. In the study it was concluded that institutional factors (corruption, property rights, the quality of bureaucracy) affected the economic growth positively. In a study by Acemoglu et al. (2001) the relationship between political institutions and economic growth for 64 developed and developing countries in total in the period between 1985 and 2000 was analysed through The Least Squares Method. In the study it was concluded that political institutions affected the economic growth positively. In the study by Acemoglu and

Robinson (2010) in which the role of institutions in economic growth and development was investigated. Theoretical analysis method was used the effect of political institutions especially the government on economic growth and development was analysed. According to the study, underdevelopment is directly related with the bad performance in economic institutions and institutionalization. Therefore, economic and political institutions of a country have a determining effect on economic growth and development.

Grogan and Moers (2001) analysed whether institutions were the determiners of economic growth and foreign direct investments or not in the period between 1990 and 1998 for 25 countries by using The Least Squares method. In the study it was determined that there was a strong relationship between the activity of state institutions and foreign direct investments. It was also concluded that the relationship between institutions and economic growth was positive. However, this relationship is weaker than the relationship between institutions and foreign direct investments. The importance of macroeconomic stability and liberalization was also confirmed with this study. Dawson (2003) analysed the relationship between political and economic liberties and long-term economic growth in the period between 1970 and 2000 using Granger causality test. In the study it was concluded that liberties generally affected the economic growth positively in long term. It was also determined that there was a causality relationship between liberties and economic growth. Glaeser et al. (2004) analysed the relationship between political institutions and economic growth in North Korea and South Korea through theoretical analysis. It was concluded that the increase of institutional quality affected the economic growth positively. Economic growth and human capital accumulation also increase the institutional quality. Underdeveloped and developing countries may get out of both poverty and lower efficiency level of political institutions (especially dictatorship) as a result of the implemented policies along with the increase in institutional quality.

Law and Bany-Ariffin (2008) analysed the relationship between institutional quality and economic performance in 72 countries in the period between 1980 and 2001. As the institutional indicators, corruption, the rule of law, bureaucracy, rejection of contracts and nationalization risk were used. It was concluded that institutional variables were important determiners of economic performance. It was also determined that the effect of institutional quality varied in low and middle income countries. According to the study, the most important factor generating the positive effect of institutional growth on long term economic performance is the rule of law. Justesen (2008) analysed the relationship between economic liberties and economic growth in the period between 1970 and 1999 through Granger causality test. It was concluded that economic liberties affected the investments and economic growth positively. It was also concluded that the effect of economic growth on economic liberties was weak.

Lee and Kim (2009) analysed the long-term indicators of economic growth for 100 countries in the period between 1965 and 2003 by using GMM estimator. In the study it was concluded that political variables and technologies and higher education was an important determiner of the long term economic growth. It was also concluded that institutional variables and higher education were important for economic growth in underdeveloped countries. Mehanna et al. (2010) analysed the relationship between governance and economic development for 23 Middle Eastern and North American

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countries between 1996 and 2005 using Generalized Method of Moments (GMM) method. It was concluded that governance quality affected the economic development positively. It was determined that accountability, government effectiveness and corruption, one of the indicators of governance quality, were the most important factors affecting the economic development.

Fayissa and Nsiah (2013) analysed the effect of institutions and governance on economic growth using Arellano-Bond models for 39 Sub-Saharan African countries in 1995-2004. In the study it was concluded that institutions and good governance affected the economic growth positively. However, it was concluded that the effect of institutional variables and good governance on economic growth varied depending on the income level of countries.

Quibria (2006) analysed the relationship between governance and economic growth for 28 developing Asian countries for the period between 1999 and 2003 through regression analysis method. The independent variable used in the study is corruption. In the study, contrary to expectations, there was no positive effect of government effectiveness on economic growth. However, it was concluded that economic growth had a positive effect on government effectiveness. Kurtz and Schrank (2007) analysed the relationship between government effectiveness and economic growth for 164 countries in the period between 1996 and 2004. It was concluded that economic growth had a positive effect on government effectiveness. However, it was found that government effectiveness had no effect on economic growth.

Alam et al. (2017) analysed the effect of government effectiveness on economic growth for 81 countries in the period between 1996 and 2011 through Panel GMM technique. In the study it was found out that government effectiveness affected the economic growth positively. In addition, according to the results, governance is highly important for reaching the development goals. While the relationship between government effectiveness and economic growth was analysed in the study, it was also stated that different results could be obtained according to different country groups. Huang and Ho (2017) analysed the relationship between governance and economic growth for 12 Asian countries in 1996-2014 period using Granger causality test. It was indicated in the study that government effectiveness leads to economic growth in countries except for Indonesia and Thailand. It is important to extend and promote the policies for increasing governance quality.

In the study by Güney (2017) the effect of government effectiveness on economic growth for 78 developing countries in the period between 1996 and 2015 was analysed through GMM. The models used by Kurtz and Schrank (2007) and Alam et al. (2017) were utilized in the study. It was concluded that government effectiveness affected the economic growth positively. In addition, the effect of government effectiveness on economic growth is stronger than trade openness, inflation, capital and labour variables. It was determined that population increase rate affected the economic growth negatively.

DATA AND METHODOLOGY

The effect of government effectiveness and the rule of law on economic growth in European Union transition economies (11 countries: Bulgaria, Czechia, Estonia, Croatia, Latvia, Lithuania, Hungary, Polonia, Romania, Slovakia, Slovenia) in the period between 2002 and 2018 is investigated by using panel data analysis method. The data were selected considering the purpose of this study and the empirical literature. The definitions of the variables were presented in Table 1. The data were collected from the World Bank (2020a, 2020b, 2020c). While the annual growth of Gross Domestic Product (GDP) was considered as the dependent variable representing economic growth in the study, government effectiveness and rule of law were used as the independent variable. Table 1 also indicates the possible relationship between the variables which consider the theoretical and empirical literature. In the study the independent variables, government effectiveness and the rule of law are expected to increase economic growth. While it is expected that government effectiveness is important for public services and public services are important for economic growth, the rule of law is expected to increase economic growth by being effective on informal economy as a result of obeying the rules. Panel data analysis was used in this study to analyse the effect of government effectiveness and rule of law on economic growth in 11 European Union transition economies. In this study, firstly a cross-sectional dependency test was applied and then a second-generation root test CADF was applied. Then, the homogeneity test of Pesaran and Yamagata (2008) and the cointegration test of Westerlund and Edgerton (2007) were performed. Then, the long-term relationship was determined, and the direction estimation of this relationship was conducted through FMOLS test and after that Emirmahmutoglu and Kose (2011) causality test was applied. Firstly, the information concerning the tests used in econometrical analysis was given and then the results were presented.

Table 1: The Variables and Definitions

Variable	Source	Possible Impact
Government Effectiveness (GEE)	World Bank (2020a)	(+)
The Rule of Law (ROL)	World Bank (2020b)	(+)
Economic Growth (GDP)	World Bank (2020c)	

Government effectiveness indicator included in the World Governance Indicators and prepared by the World Bank includes the factors about the quality of public services, the quality of civil service and the level of independence from political pressures, policy making and the implementation quality of these policies and the reliability of the government's loyalty to such policies. Government effectiveness has values between -2,5 and 2,5 and as this value approaches to 2,5, the government effectiveness increases, however; as it approaches to -2,5, government effectiveness decreases (World Bank, 2020a). Rule of law among the World Governance Indicators includes the possibilities about the perceptions of the society about the rules and obeying them and especially the quality of contract implementation, property rights, crime and violence such as police and courts. The rule of law has the values between -2,5 and 2,5 and as this value approaches

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to 2,5, the rule of law increases, however; in the opposite it decreases (World Bank, 2020b).

Government effectiveness, rule of law and economic growth data of European Union transition countries (11 countries) which form the sample of our study are presented in Table 2. Table 2 shows that Slovenia has the highest value in government effectiveness data and Estonia follows it, however; Romania has the lowest value. When the rule of law data is analysed, we can see that Estonia has the highest value and Slovakia follows it, however; Bulgaria has the lowest value. When we look at economic growth data, we can see that the highest growth is in Hungary in 2018 and Estonia follows it. Croatia has the lowest growth rate among the countries.

Table 2: Governance Indicators Data for Selected EU Countries (2018)

Country	Government Efficiency	Rule of Law	Economic Growth
Bulgaria	0,27	-0,03	3,33
Croatia	0,46	0,32	2,64
Czechia	0,92	1,05	3,60
Estonia	1,19	1,24	4,80
Hungary	0,49	0,56	5,14
Latvia	1,04	0,96	3,24
Lithuania	1,07	0,96	4,23
Poland	0,66	0,43	5,04
Romania	-0,25	0,33	3,97
Slovakia	1,13	1,06	4,00
Slovenia	0,71	0,53	4,37

Source: World Bank (2020a; 2020b; 2020c).

Government effectiveness may vary depending on various factors such as the public size and political stability in the country and therefore it may vary from country to country. The rule of law may vary depending on the factors such as constitutional system and judicial system in the country. In other words, the rule of law data may vary depending on the judicial system in the country, it can be said that economic growth may vary from country to country depending on various factors such as conjunctural situation in the world, economic stability of the country and the investments in the country.

EMPIRICAL RESULTS AND ANALYSIS

In the study Government Effectiveness (GEE) and Rule of Law (ROL) were used as independent variable, however, Economic Growth (GDP) was used as dependent variable in the estimated model. The effect of government effectiveness and rule of law on economic growth was analysed in the study and the following model was estimated.

$$\text{Model: } GDP_{it} = \alpha_{it} + \beta_1 GEE_{it} + \beta_2 ROL_{it} + u_{it} \quad (1)$$

Cross-Sectional Dependence Test Analysis

Conducting the analysis without considering the cross-sectional dependence of the variables affects the results to be inconsistent. Thus, cross-sectional dependence of the series should be checked before the analysis (Pesaran, 2004). Breusch and Pagan

(1980) LM test is applied when the time dimension is bigger than cross sections for cross-sectional dependence test (Baltagi, Feng and Kao, 2012: 165-167).

$$LM_{BP} = T \sum_{i=1}^{n-1} \sum_{j=i+1}^n \check{\rho}_{ij}^2. \quad (2)$$

Pesaran (2004) CDLM test is used when the time dimension is smaller than cross section dimension and Pesaran (2004) CDLM2 test is used when the time dimension is equal to the cross section dimension. Moreover, Pesaran et al. (2008) developed a bias-adjusted version (Bias-Adjusted CD Test) of cross sectional independence statistics of BPLM test in a heterogeneous panel. The null hypothesis indicates that there is no cross-sectional dependence, but an alternative hypothesis. In Table 3, cross-sectional dependence test results are summarized. The results of cross section dependence tests show that cross-sectional dependence exists in all variables.

Table 3: The Results of Cross Section Dependence

Test	GEE		ROL		GDP	
	t stat.	Prob.	t stat.	Prob.	t stat.	Prob.
CDLM ₁	180.639	0.000	364.370	0.000	509.362	0.000
CDLM ₂	11.979	0.000	29.497	0.000	43.321	0.000
CDLM	11.635	0.000	29.153	0.000	42.978	0.000
Bias-Adjusted CD Test	3.532	0.004	6.916	0.000	22.063	0.000

Panel Unit Root Analysis

Pesaran's (2007) Cross-Sectionally Augmented Dickey-Fuller (CADF) is one of the second generation unit root tests considering the cross-sectional dependence. Pesaran (2007) shows the CADF regression equation in Equation 3.

$$y_{it} = (1 - \phi_i)\mu_i + \phi_i y_{i,t-1} + u_{it}, i = 1, \dots, N; t = 1, \dots, T \quad u_{it} = \gamma_i f_t + \varepsilon_{it} \quad (3)$$

Pesaran (2007) CADF unit root test can be performed for each cross section (for each country) and the panel overall. While CADF statistics is calculated for each cross section in implemented unit root test, CIPS (Cross-Sectionally Augmented IPS) statistics is calculated in the panel overall (Pesaran, 2007). In the CADF unit root test; the null hypothesis indicates that the series is not stationary, and that the alternative hypothesis series is stationary. In the CADF unit root test, the average of the calculated t value for each section is taken and the CIPS value (Equation 4) is found (Pesaran, 2007, p. 276).

$$CIPS(N, T) = \bar{t} = N^{-1} \sum_{i=1}^N t_i(N, T) \quad (4)$$

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Table 4: The Results of Panel Unit Root Test

Level	GDP	GEE	ROL
Constant	-3.083	-3.320	-2.965
Constant and Trend	-4.310	-3.295	-3.201
First Difference	GDP	GEE	ROL
Constant	-5.501***	-5.047***	-4.053***
Constant and Trend	-5.170***	-4.116**	-4.848***

Note: * 10%, ** 5%, *** 1% pointing the null hypothesis at a level of significance. Constant + trend is used for the test model. Critical values in constant -2.76 (1%), -2.40 (5%), -2.22 (10%); in the constant + trend -3,61 (1%), -3,11 (5%), -2,89 (10%), for more details see Pesaran (2007).

Table 4 summarized the CADF unit root test results. It was determined as a result of CADF unit root test that series were not stationary at level when CIPS values were analysed and therefore the null hypothesis cannot be rejected. It was determined that series became stationary in their first differences.

The Results of Westerlund-Edgerton (2007) Cointegration Analysis

Pesaran and Yamagata (2008) Homogeneity Test was used before the cointegration test. This approach also plays a role in determining the test to be used in the identification of the relationship between series and in the stationary analysis of the series (Pesaran and Yamagata, 2008, 56). In the homogeneity test, the null hypothesis indicates that the slope coefficients of the series are homogeneous, the alternative hypothesis indicates that the slope coefficients of the series are heterogeneous. Homogeneity test and the cointegration test results are presented in Table 5. The results show that slope coefficients of the cointegration equations are homogeneous.

Table 5: Cointegration Test Results

Model	LM - Stat.	Asymptotic Prob.	Bootstrap Prob.
Constant	6.394	0.000	0.339
Homogeneity Test Results			
		t-stat.	P-value
	$\bar{\Delta}$	-1.458	0.928
	$\bar{\Delta}_{adj}$	-1.597	0.845

Note: Bootstrap critical values were taken from 10,000 replications.

In order to test the long term relationship between the variables, Westerlund and Edgerton (2007) panel bootstrap cointegration test was used after the homogeneity test. This test takes into consideration with cross-sectional dependence. According to the results, null hypothesis was accepted at 5% significance level and it is determined that there is a cointegration relationship between the series.

Panel FMOLS and Emirmahmutoglu-Kose (2011) Causality Test Results

The long term relationship coefficient and the direction of the relationship between variables can be analysed through FMOLS (Fully Modified Ordinary Least Square) test methods developed by Pedroni (2000). Fully modified OLS principles are used in the panel in order to develop new methods for estimating and testing hypotheses for

cointegration vectors in dynamic panels consistent with the degree of cross-sectional heterogeneity allowed in the unit root test and panel cointegration studies (Pedroni, 2000, p. 93).

Table 6: FMOLS Coefficient Estimation Results

<i>Model: $GDP_{it} = \alpha_{it} + \beta_1 GEE_{it} + \beta_2 ROL_{it} + u_{it}$</i>			
	Coefficient	t-statistic	Prob.
GEE	4.871730	2.808543	0.005**
ROL	-1.612120	-0.897425	0.3707

Note: * 10%, * 5%, and * 1% levels are statistically significant.

According to the results, it was determined that government effectiveness affected the economic growth positively and the rule of law coefficient is statistically insignificant. Government effectiveness affected the economic growth at 10 % significance level. Since government effectiveness is important for public services and public expenditures have a role in providing economic growth. It can be thought to affect the economic growth positively.

Emirmahmutoglu and Kose (2011) causality test considers the cross-sectional dependence and also it is possible to use it as the series to be used in the panel are stationary at different levels and the cointegration relationship between series is not determined. The results of causality test are given in Table 7.

Table 7: Causality Test Results

Country	GEE=>GDP		GDP=>GEE		ROL=>GDP		GDP=>ROL	
	Stat.	Prob.	Stat.	Prob.	Stat.	Prob.	Stat.	Prob.
Bulgaria	0.575	0.448	0.066	0.797	6.206	0.102	3.294	0.348
Croatia	0.473	0.492	2.139	0.144	0.474	0.491	0.124	0.725
Czechia	0.301	0.583	1.012	0.314	0.073	0.786	0.195	0.659
Estonia	7.828	0.050	2.206	0.531	1.099	0.577	1.665	0.435
Hungary	0.435	0.510	0.656	0.418	0.550	0.458	0.000	0.990
Latvia	1.426	0.490	1.729	0.421	0.625	0.891	19.032	0.000
Lithuania	0.311	0.577	0.488	0.485	0.780	0.377	0.163	0.687
Poland	9.691	0.021	10.69	0.013	5.759	0.056	0.401	0.818
Romania	0.076	0.782	2.443	0.118	0.404	0.939	51.959	0.000
Slovakia	0.024	0.876	0.021	0.885	0.495	0.482	0.011	0.915
Slovenia	2.276	0.131	0.200	0.654	1.653	0.199	0.759	0.384
Average	26.4**	0.031	26.815	0.399	21.8*	0.067	73.38***	0.000

Note: * 10%, * 5%, and * 1% levels are statistically significant.

According to the results of causality analysis, there was a one-way relationship from government effectiveness to economic growth and a two-way relationship between rule of law and economic growth. No causality relationship could be identified from economic growth to government effectiveness. It can be explained that the causality relationship from government effectiveness to economic growth depends on the reasons such as more effective operation of decision-making processes depending on government effectiveness and identification of public expenditures, which are important

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in economic growth, in decision-making process. Economic growth is not a determiner of government effectiveness, and that government effectiveness has various determiners (economic, political, administrative criteria) other than economic growth. A two-way causality was determined between the rule of law and economic growth. It can be said that economic growth can be affected positively with the reasons such as obeying the rules as a result of rule of law and the increase in the number of legal transactions. As a result of the economic growth, it can be expected that improvements can be observed in also legal area and there will be an increase in the number of registered transactions along with the economic growth and this may have an effect on rule of law. When we evaluate the countries result, there is one-way causality from government effectiveness to economic growth for Estonia and Poland. Poland also has two-way causality between government effectiveness and economic growth. It is determined that there is a two-way relationship between rule of law and economic growth for Poland. Moreover, there is a one-way relationship from rule of law to economic growth for Poland, whereas Latvia and Romania have one-way relationship from economic growth to rule of law.

CONCLUSION

Today policy-making and decision-making processes of states are conducted via governments. Institutions have effects on policy-making and decision-making process and these policies may have effects on also economy as on other areas. In addition, the situations such as budgeting and economic policy-making process are directly related with the economy and they become a part of decision-making process. Obeying the rules is another issue that is important for the countries as well as the institutions that are effective in the decision-making process. Obeying the rules may have positive effects on also economy when the transactions are registered. As a result of the increasing legality along with obeying the rules, institutionalization and the number of registered transactions increase, and this may have a decreasing effect on informal economy. Therefore, obeying the rules may have remarkable effects on economy.

The reasons such as the government effectiveness on decision-making process and the increase in legality through obeying the rules may have various effects on also economy as in other fields. Thus, analysing the effect of government effectiveness and rule of law on economy is important. The effect of government effectiveness and the rule of law on economic growth in 11 European Union transition countries between 2002 and 2018 was investigated in this study using panel data analysis. It was concluded from the study that government effectiveness affected the economic growth positively, however; rule of law had no statistically significant effect on economic growth. In addition, it was determined that there was a one-way causality relationship from government effectiveness to economic growth and a two-way causality between rule of law and economic growth. With reference to the study results, conducting a good decision-making and policy-making process and taking feasible and beneficial policies and decision for the country will have positive effects on economic growth because government effectiveness affects economic growth positively. Therefore, it can be

concluded that emphasizing government effectiveness will have significant contributions to economic growth for countries.

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