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THE IMPACT OF INSTITUTIONAL QUALITY ON ECONOMIC GROWTH: A COMPARATIVE ANALYSIS OF THE EU AND NON-EU COUNTRIES OF SOUTHEAST EUROPE

ABSTRACT: *The quality of institutions and its impact on economic growth has become more important in recent years, especially in transition countries that must reform their institutions to create a market economy and meet the preconditions for joining the EU. This is the case with the countries of Southeastern Europe, some of which are already EU members, while others are in the process of joining the EU. This paper examines the effects of institutional quality on the economic growth of South-East Europe and compares these effects in EU and non-EU countries for the period 1996–2017, using Worldwide Governance Indicators (WGI) to measure the quality of institutions and the GDP growth rate. The panel autoregressive distributed lag (ARDL) approach is used to analyse the*

relationship between institutional quality and economic growth. The results show that in EU countries there is a long-run relationship between institutional quality and economic growth for all significant variables, while in the non-EU countries only government effectiveness, political stability and absence of violence, regulatory quality, and voice and accountability are statistically significant. Furthermore, in EU countries there is no short-run relationship between institutional quality and economic growth, while in the non-EU countries of SEE, regulatory quality and voice and accountability are significant.

KEY WORDS: *institutional quality, economic growth, South-East Europe, Worldwide Governance Indicators, GDP*

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1. INTRODUCTION

The quality of institutions and its impact on economic growth has become more important in recent years, especially in transition countries that have to reform their institutions to create a market economy and meet the preconditions for joining the EU. North (1991) defines institutions as constraints designed by people who shape political, economic, and social interactions. They consist of informal prohibitions (sanctions, customs, codes of conduct) and formal rules (laws, property rights). When the prosperity of a country is evaluated its institutions must be taken into account. Legal and administrative organisations, which are the pillars of a society, establish an environment for the creation of social well-being. The legal and administrative frameworks within which individuals, businesses, and government interact to generate revenue and ensure economic prosperity define the institutional environment. Institutional support for the development of market freedoms, finding the optimal level of regulation, preventing corruption, freeing the judiciary from political dependence, and protecting the environment are also important (Račić & Pavlović 2012).

According to the 1993 Copenhagen Criteria, the first criterion a country seeking to become an EU member must meet is that of stable institutions that guarantee democracy, the rule of law, human rights, and respect for and protection of property. Accordingly, it is necessary to build an institutional framework that will be able to align the functioning of institutions with these criteria and with EU institutions in order that the country can become an EU member state. This is the case with the countries of Southeastern Europe (SEE), some of which are already EU members, while others are in the process of joining the EU. Therefore, the aim of this paper is to examine the effects of institutional quality on the economic growth of Southeast European countries and to compare these effects in EU and non-EU countries. The hypotheses of the research are as follows:

Hypothesis 1: There is a long-run relationship between economic growth and quality in SEE countries, EU member countries, and non-EU countries.

Hypothesis 2: There is a short-run relationship between economic growth and institutional quality in both non-EU and EU SEE countries.

Hypothesis 3: In response to a short-run shock, the convergence to the long-run equilibrium will be faster in the SEE EU member countries than in non-EU SEE countries.

Paper is structured as follows. After the introduction, section 2 provides a literature review of previous studies of the impact of institutional quality on economic growth. Section 3 presents the data and methodology. Section 4 presents the empirical results and discussion, and section 5 concludes.

2. LITERATURE REVIEW

Since the transition of former socialist countries to market economies, interest in the quality of institutions as a determinant of economic growth has increased (Elster et al., 1998; Rodrik, 2008; Acemoglu & Robinson, 2010; Gani, 2011; Nawaz et al., 2014; Shapkova & Disoska, 2017). Although there is a lot of research on the disparities between countries, no determination has been reached as to how to reduce these disparities. However, empirical and theoretical research examining the determinants of economic growth has found the quality of institutions to be an essential determinant of inequality between countries.

Several authors have argued that the quality of institutions significantly affects economic growth. Referring to the quality of institutions, Kaufmann et al. (2011) highlight the following characteristics: government competence to formulate and implement key economic policies effectively; the quality of the electoral system that enables the election, monitoring, and change of government; and the appreciation of these institutions by citizens and the government that governs the economic and social interactions between them. The failure of several countries to implement the transition has been attributed to weak institutional quality (Rodrik, 2008): standard reforms did not produce lasting results because deeper institutional factors were unfavourable.

Numerous studies have shown that growth depends on an accumulation of human capital and access to modern technologies, which is conditioned by institutional characteristics such as the organisation and functioning of the manufacturing sector, government efficiency, the rule of law, and the quality of the legal system. Mauro (1995), Knack and Keefer (1995), and Barro (1997) also find institutions to be vital for investment and long-term sustainable growth. Hall

and Jones (1999) find that differences in the quality of institutions worldwide cause variation in capital accumulation, education, and productivity growth, and unequal income distribution.

Acemoglu and Robinson (2010) consider institutions to be a key determinant of economic growth that cause unequal development across a country. Institutions that design incentives in society can stimulate or reduce economic activity. Murphy et al. (1993) find that poor-quality institutions can slow down economic activity by directing economic agents to redistributive policies with lower economic returns instead of growth-enhancing economic activities.

Nawaz et al. (2014) conduct an empirical analysis to determine the effect of institutions on economic growth in Asian economies from 1996 to 2012 using Generalized Method of Moments (GMM) with fixed effects. The results show that there is a relationship between institutions and economic growth and that these effects differ in developed and developing countries. Furthermore, they find that institutions are more effective in determining long-run economic growth in developed than developing countries, and that institutions in developing countries need to change in order to facilitate economic growth. Shapkova and Disoska (2017) investigate the impact of trade and institutions on economic growth in transition economies in Central and Eastern Europe and the Western Balkans from 2000 to 2016 using panel regression analysis. The results show a positive relationship between economic growth and the rule of law, control of corruption, regulatory quality, and voice and accountability.

Samarasinghe (2018) examines the impact of governance and institutional quality on economic growth for 145 countries from 2002 to 2014 using fixed-effects and random-effects panel regression models. The results show a significant positive relationship between economic growth and control of corruption at the 5% significance level, and between economic growth and political stability and absence of violence at the 10% significance level. Han et al. (2014) examine whether governance indicators explain development performance. They find that government effectiveness, political stability, control of corruption, and regulatory quality all have a more significant positive impact on a country's growth than voice and accountability and the rule of law. The authors propose that low-income countries should try to improve government effectiveness, the rule of law,

and regulatory quality, while decreasing the level of corruption. On the other hand, middle-income and high-income countries will benefit if voice and accountability and political stability are improved (Han et al. 2014).

Iqbal and Daly find that an absence of the rule of law, inadequate political and public policies, and a lack of reliable infrastructure constitute a weak institutional framework that cannot contribute to the development of a market economy and economic growth (Iqbal & Daly, 2004). They argue that in transition economies democracy is associated with economic growth, while in democratic countries a lower level of corruption is associated with rapid economic growth. North (1990) finds that good quality institutions can stimulate economic growth by reducing uncertainty and promoting efficiency. Gani (2011) investigates the relationship between economic growth and voice and accountability and finds a negative relationship between these variables. Furthermore, he finds a negative relationship between the control of corruption and economic growth in developing countries. He advocates that developing countries improve voice and accountability, regulatory quality, and the rule of law, as the main obstacles to their economic growth. Furthermore, these countries can enhance economic growth by reducing the level of corruption, since high levels of corruption weaken the quality of institutions.

Djankov et al. (2003) find that better-regulated countries grow faster and that long-term sustainable economic growth depends on the quality of institutions. Without well-functioning institutions, all policies and processes are less efficient, and markets cannot function well if EU accession countries do not strengthen their institutions in parallel with fulfilling other conditions. The risk of formally entering the end of negotiations without sufficient administrative capacity increases, i.e., without quality institutions with trained personnel that can function efficiently in the EU. A lack of sufficient quality institutions fails to meet certain EU accession requirements and may impact a country's economic growth by curtailing appropriate pre-accession funding (Đurović, 2016). Moreover, infrastructure, macroeconomic stability, and trade reform cannot contribute to the competitiveness of an economy without an excellent institutional framework. The ultimate goal of raising the competitiveness of the economy is to raise the living standard of the population, and this cannot be achieved without an appropriate development strategy and the elimination of systemic constraints,

which implies the correction of economic policy and the strengthening of market institutions, institutions, and the rule of law (Maksimović, 2012).

3. DATA AND METHODOLOGY

Kaufmann et al. (2008) created aggregate and individual governance indicators that include the following dimensions of governance:

- *Voice and accountability* – the extent to which citizens of a particular country can participate in the choice of government; perceptions of freedom of expression, freedom of association, and freedom of the media.
- *Political stability and absence of violence* – the likelihood that the government will be destabilised or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.
- *Government effectiveness* – the quality of public services, the quality of the civil service and the degree of its independence from political pressure, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
- *Regulatory quality* – the government's ability to formulate and implement policies and regulations that allow and promote private sector development.
- *The rule of law* – the extent to which institutions trust and respect the rules of society, and the quality of contract performance, property rights, police and court work, and the likelihood of crime and violence.
- *Control of corruption* – the extent to which public authority is used for private gain, including both major forms of corruption and the extent to which elites and private interests abuse state institutions.

The methodology encompasses several hundred variables from 31 different data sources and contains management perceptions such as reports from respondents, NGOs, commercial business information providers, and public sector organisations worldwide. The composite indicator of effective institutional governance is expressed through a system of equations in standard regular units in the range of –2.5 to 2.5 (Jakopin, 2018).

This paper uses annual data for six governance indicators (WGI) and the GDP growth rate for the period 1996–2017 for five SEE EU member countries (Croatia,

Romania, Bulgaria, Greece, and Slovenia) and five non-EU SEE countries (Serbia, Bosnia and Herzegovina, North Macedonia, Albania, and Montenegro). Data were retrieved from the World Bank database.

The model follows Samarasinghe (2018), Gani (2011), and Nawaz et al. (2014). Samarasinghe (2018) includes only political stability and absence of violence/terrorism, control of corruption, and voice and accountability. Since there was no problem of multicollinearity between variables, our model includes three additional indicators: government effectiveness, regulatory quality, and the rule of law. The idea of examining the impact of institutional quality on the economic growth of EU and non-EU members is based on Nawaz et al. (2014), who examine these effects separately for developed and developing Asian countries.

The following equation establishes the model:

$$GDP_{it} = f(VA_{it}, PS_{it}, GE_{it}, RQ_{it}, RL_{it}, CC_{it}) \quad (1)$$

where GDP_{it} is GDP growth of country i in period t , VA_{it} is voice and accountability of country i in period t , PS_{it} is political stability and absence of violence/terrorism of country i in period t , GE_{it} is government effectiveness of country i in period t , RQ_{it} is the regulatory quality of country i in period t , RL_{it} is the rule of law of country i in period t , CC_{it} is control of corruption of country i in period t ; and $t = 1996, \dots, 2017$.

Therefore, the following long-term (2) and short-term (3) equations are estimated simultaneously:

$$GDP_{it} = \alpha_1 + \sum_{l=1}^{p_t-1} \beta_{il}^* GDP_{i,t-l} + \sum_{l=0}^{q_i} \delta_{il}^* VA_{i,t-l} + \sum_{l=0}^{k_i} \theta_{il}^* PS_{i,t-l} + \sum_{l=0}^{m_i} \gamma_{il}^* GE_{i,t-l} + \sum_{l=0}^{n_i} \rho_{il}^* RQ_{i,t-l} + \sum_{l=0}^{s_i} \nu_{il}^* RL_{i,t-l} + \sum_{l=0}^{u_i} \tau_{il}^* CC_{i,t-l} + e_{it} \quad (2)$$

$$\begin{aligned}
 DGDP_{it} = & \varphi ECT_{i,t-l} + \sum_{l=1}^{p_i-1} \beta_{il} DGDP_{i,t-l} + \sum_{l=0}^{q_i} \delta_{il} DVA_{i,t-l} + \\
 & \sum_{l=0}^{k_i} \theta_{il} DPS_{i,t-l} + \sum_{l=0}^{m_i} \gamma_{il} DGE_{i,t-l} + \sum_{l=0}^{n_i} \rho_{il} DRQ_{i,t-l} + \\
 & \sum_{l=0}^{s_i} \vartheta_{il} DRL_{i,t-l} + \sum_{l=0}^{u_i} \tau_{il} DCC_{i,t-l} + \alpha_2 + e_{it}
 \end{aligned} \tag{3}$$

where β_{il}^* , δ_{il}^* , θ_{il}^* , γ_{il}^* , ρ_{il}^* , ϑ_{il}^* , τ_{il}^* are long-run coefficients and β_{il} , δ_{il} , θ_{il} , γ_{il} , ρ_{il} , ϑ_{il} , τ_{il} are short-run coefficients.

The equations are estimated separately for two groups of countries: EU SEE countries and non-EU SEE countries. A cross-section dependence test and unit root tests are applied to determine whether cross-section dependence exists between data and whether the data are integrated of the same order. The Auto-Regressive Distributed Lag (ARDL) approach is used to determine whether there is a short-run and long-run relationship between economic growth and institutional quality.

4. RESULTS AND DISCUSSION

Table 1 shows the descriptive statistics for all the variables used in the study. The average GDP growth rate for EU member SEE countries from 1996 to 2017 is 2.33, while for non-EU SEE countries the average growth rate is 4.38, higher than in the observed EU countries. The minimum GDP growth rate is -9.13 for EU countries (Greece in 2011) and -12.15 for non-EU countries (Serbia in 1999), recorded when the countries were suffering from crisis and war, respectively. The maximum GDP growth rate in the observed period was 8.36 for EU countries (Romania in 2004) and 88.96 for non-EU countries (Bosnia and Herzegovina in 1996). The average values of the six dimensions of governance for EU countries are above zero, but below one. In EU countries the highest average value is for the dimension voice and accountability (0.67), while the lowest average value is for the dimension control of corruption (0.15). The situation is the same for non-EU countries (Table 1).

Table 1: Descriptive Statistics for Variables

| | Mean | Median | Min | Max | SD | Obs. |
|-------------------------|--------|--------|--------|-------|------|------|
| EU Countries | | | | | | |
| GDP (%) | 2.33 | 3.29 | -9.13 | 8.36 | 3.73 | 110 |
| VA | 0.67 | 0.56 | -0.29 | 0.56 | 0.31 | 95 |
| PS | 0.45 | 0.46 | -0.38 | 1.31 | 0.40 | 95 |
| GE | 0.38 | 0.39 | -0.57 | 1.19 | 0.45 | 95 |
| RQ | 0.55 | 0.58 | -0.18 | 1.09 | 0.28 | 95 |
| RL | 0.33 | 0.16 | -0.63 | 1.26 | 0.47 | 95 |
| CC | 0.15 | -0.02 | -0.62 | 1.21 | 0.46 | 95 |
| Non-EU Countries | | | | | | |
| GDP (%) | 4.38 | 3.47 | -12.15 | 88.96 | 9.61 | 108 |
| VA | -0.002 | 0.07 | -1.21 | 0.34 | 0.27 | 94 |
| PS | -0.30 | -0.40 | -2.14 | 0.82 | 0.49 | 88 |
| GE | -0.31 | -0.26 | -1.19 | 0.35 | 0.36 | 89 |
| RQ | -0.10 | -0.09 | -0.91 | 0.50 | 0.32 | 89 |
| RL | -0.07 | -0.24 | -1.01 | 1.26 | 0.59 | 94 |
| CC | -0.41 | -0.36 | -1.20 | 0.52 | 0.28 | 94 |

Note: Author’s calculation in EViews 10; VA – voice and accountability, PS – political stability and absence of violence, GE – government effectiveness, RQ – regulatory quality, RL – rule of law, CC – control of corruption.

The lowest value for voice and accountability in EU countries is -0.29 (Croatia in 1998), while the highest is 0.56 (Bulgaria in 2009). The lowest value of voice and accountability in Croatia is probably the consequence of war and the political situation. The lowest and highest value of this dimension in non-EU countries is recorded in Serbia in 1996 and 2006 (-1.21 and 0.34, respectively). The lowest value of voice and accountability in 1996 in Serbia is the result of the volatile political situation, international sanctions, and the economic crisis, as well as the wars in the surrounding countries. Between 2013 and 2015, Serbia’s score for voice and accountability increases. North Macedonia and Bosnia and Herzegovina have negative values for voice and accountability until 2011, while Albania increases its voice and accountability score from 2011. Political stability and absence of violence had the lowest negative values in Romania in 2000 (EU countries) and Serbia in 1998 (non-EU countries), and the highest values in Slovenia in 1996 (EU countries) and Montenegro in 2009 (non-EU countries).

Croatia made the most progress in the observed period, as it successfully implemented policy frameworks and adjusted its institutional system to the EU *acquis communautaire* as a precondition for EU accession. On the other hand, North Macedonia, a candidate country for EU membership, made the least progress in terms of political stability and absence of terrorism, primarily due to political instability in the country but also to disagreements with Greece over the country's name.

The lowest government effectiveness between 1996 and 2017 was in Romania in 1998 and Bosnia and Herzegovina in 1996, while the highest values were recorded in Slovenia in 2008 and Montenegro in 2005. As the efficiency of institutions in Bosnia and Herzegovina is below the average of transition countries – especially EU candidate countries – it cannot count on significant progress towards European integration unless it improves the efficiency of its institutions. Considerable improvement in the quality of institutions in Bosnia and Herzegovina would undoubtedly lead to an increase in economic growth and development in the medium-to-long term (Efendić, 2010).

The lowest value of regulatory quality was in Bulgaria and Bosnia and Herzegovina in 1996, and the highest values were in Slovenia in 1996 and North Macedonia in 2017. The minimum values for government efficiency and regulatory quality were recorded in Bosnia and Herzegovina during the years of war and political instability (Radulović, 2018). Rule of law had the lowest values in Croatia in 1996 and Albania in 2000, and the highest values in Slovenia and Serbia in 1998. Given that the rule of law measures the perception of the extent to which institutions are trusted and the rules of society are respected – especially the quality of contract execution, property rights, and the police and courts – and the likelihood of crime and violence, this value of the sub-index should signal to society and the authorities that the quality of institutions in this segment needs to be improved. Control of corruption was lowest in Romania and Serbia in 1998, and highest in Slovenia and Montenegro in the same year. Control of corruption improves slightly in Romania immediately before and a year after joining the EU, but has worsened since 2008 (Bartlett et al., 2013). Institutional underdevelopment is one of the key drivers of corruption in underdeveloped economies where market institutions are still developing (Jakopin, 2018). The general conclusion is that corruption control is weak in all SEE countries

regardless of their EU membership, primarily because the level of corruption control remains low in Romania and Bulgaria despite their EU membership. These results may also be due to slower changes in informal institutions that are incorporated into the culture and history of the observed SEE countries (Penev & Rojec 2014).

The Pesaran CD test (Pesaran, 2004) was used to test whether there is cross-section dependency in the time series, because it can lead to substantial bias in estimations. The null hypothesis that there is no cross-section dependence (correlation) was tested, and results showed that there is cross-section dependence in GDP for EU countries, and in GDP, VA, PS, GE, RQ, and CC for non-EU countries (rejected null hypothesis), so a change of these variables in any of the observed countries affected the other countries as well (Table 2). The null hypothesis was not rejected for VA, PS, GE, RQ, RL, and CC for EU countries, and RL for non-EU countries (Table 2).

Table 2: Cross-section Dependence Test

| Variable | EU Countries | Non-EU Countries |
|----------|--------------|------------------|
| | t-Statistics | |
| GDP | 8.71* | 1.68*** |
| VA | -0.45 | 1.93*** |
| PS | 1.14 | 8.39* |
| GE | 0.44 | 2.26** |
| RQ | -1.47 | 3.61* |
| RL | 1.29 | 10.39 |
| CC | 0.95 | 7.09* |

Note: Author’s calculation in EViews 10. * significant at the 1% level; ** significant at the 5% level; *** significant at the 10% level. VA – voice and accountability, PS – political stability and absence of violence, GE – government effectiveness, RQ – regulatory quality, RL – rule of law, CC – control of corruption.

Depending on the results of the Pesaran CD test, a unit root test of the first generation (if there is no cross-section dependence) and of the second generation (if there is cross-section dependence) is used. Table 3 shows the results of the Im, Pesaran, & Shin (IPS) unit root test (Im et al. 1997). The results show that the variables GDP, VA, and PS for EU countries are stationary at level, while the

variables GE, RQ, RL, and CC are stationary at the first difference. The results also show that the variables GDP and CC for non-EU countries are stationary at level, while the variables VA, PS, GE, RQ, and RL are stationary at the first difference (Table 3).

Table 3: Im, Pesaran, & Shin (IPS) Unit Roots Tests

| EU Countries | Im, Pesaran, & Shin (IPS) | | Non-EU Countries | Im, Pesaran, & Shin (IPS) | |
|--------------|---------------------------|-------------------|------------------|---------------------------|-------------------|
| | Intercept | Intercept & Trend | | Intercept | Intercept & Trend |
| GDP | -2.58* | -1.86** | GDP | 3.77* | -3.14* |
| VA | -1.46** | -3.71* | VA | -0.05 | 0.29 |
| PS | -3.07* | -1.22* | D(VA) | 4.82* | -4.86* |
| GE | -0.80 | -1.12 | PS | 0.25 | -1.34*** |
| D(GE) | -6.62* | -4.91* | D(PS) | -7.01* | -4.13* |
| RQ | -0.46 | -1.59*** | GE | -0.38 | -3.23* |
| D(RQ) | -4.70* | -5.25* | D(GE) | -9.03* | -7.81* |
| RL | 0.42 | -2.79* | RQ | -0.28 | -1.46*** |
| D(RL) | -8.04* | -6.68* | D(RQ) | -10.09* | -7.75* |
| CC | -1.25 | -0.57 | RL | -0.71 | -3.13* |
| D(CC) | -3.95* | -4.89* | D(RL) | -7.26* | -4.95* |
| | | | CC | -3.09* | -3.19* |

Note: Author’s calculation in EViews 10. * significant at the 1% level; ** significant at the 5% level; *** significant at the 10% level. VA – voice and accountability, PS – political stability and absence of violence, GE – government effectiveness, RQ – regulatory quality, RL – rule of law, CC – control of corruption.

The Kao test of cointegration (Kao, 1999) was used to test the null hypothesis that there is no cointegration among variables when GDP is the dependent variable. The results of the Kao test show that there is cointegration among variables for EU countries ($t=-1.60, p<0.05$) at the 5% significance level, and for non-EU countries ($t=-3.49, p<0.01$) at the 1% significance level. Since the variables are not integrated of the same order, the panel ARDL model developed by Pesaran et al. (1999) may be applied to determine whether there is a short-run and long-run relationship between economic growth and the six dimensions of governance.

The optimal lag length is determined using Akaike Information Criterion (AIC) and is found to be ARDL (1, 1, 1, 1, 1, 1) for both EU and non-EU SEE countries.

Table 4 shows the model estimation results for the long-run relationship between the six dimensions of governance and economic growth. The results show a long-run relationship between institutional quality and economic growth in EU countries for all significant variables. There is a positive long-run relationship between economic growth and the rule of law and control of, while there is a negative long-run relationship between economic growth and voice and accountability, political stability and absence of violence, government effectiveness, and regulatory quality.

In the case of non-EU SEE countries there is only a long-run relationship between economic growth and government effectiveness, political stability and absence of violence, regulatory quality, and voice and accountability. Furthermore, the results showed that there is a positive long-run relationship between economic growth and political stability and absence of violence and government effectiveness, while there is a negative long-run relationship between economic growth and voice and accountability and regulatory quality.

Table 4. Panel ARDL Long-Run Results

| Variable | Coefficient | Std. Error | t-Statistic | p |
|---------------------|-------------|------------|-------------|------|
| EU Countries | | | | |
| VA | -29.44* | 1.01 | -29.24 | 0.00 |
| PS | -11.62* | 0.77 | -15.15 | 0.00 |
| GE | -2.47** | 1.05 | -2.35 | 0.02 |
| RQ | -18.88* | 1.37 | -13.81 | 0.00 |
| RL | 5.46* | 1.39 | 3.91 | 0.00 |
| CC | 64.92* | 1.43 | 45.37 | 0.00 |

| Non-EU Countries | | | | |
|-------------------------|---------|------|-------|------|
| VA | -4.09** | 1.87 | -2.19 | 0.03 |
| PS | 4.07* | 1.29 | 3.15 | 0.00 |
| GE | 5.31*** | 2.72 | 1.96 | 0.06 |
| RQ | -19.89* | 2.49 | -7.99 | 0.00 |
| RL | -3.69 | 3.55 | -1.04 | 0.30 |
| CC | 3.09 | 2.27 | 1.20 | 0.24 |

Note: Author’s calculation in EViews 10. Dependent variable: GDP. * significant at the 1% level; ** significant at the 5% level; *** significant at the 10% level. VA – voice and accountability, PS – political stability and absence of violence, GE – government effectiveness, RQ – regulatory quality, RL – rule of law, CC – control of corruption.

It is evident that in both EU and non-EU SEE countries there is a negative long-run relationship between economic growth and voice and accountability and regulatory quality. This is in line with results obtained by Gani (2011). Moreover, it is interesting that in both EU and non-EU SEE countries there is a long-run relationship between economic growth and political stability and absence of violence, but in EU countries the relationship is negative and in non-EU countries it is positive (Table 4). The results for non-EU SEE countries are in line with the results obtained by Samarasinghe (2018) and Han et al. (2014).

The error correction term (ECT) for both EU and non-EU SEE countries is negative and statistically significant and shows how much of the disequilibrium caused by a shock in the short run will be corrected in the long run. In the case of SEE countries the EU members’ error correction term is -0.58 and statistically significant at the 5% level and shows that in response to a shock the speed of adjustment towards equilibrium is 58% annually. The error correction term (ECT) for non-EU SEE countries is -0.88 and statistically significant at the 1% level and shows that in response to a shock the speed of adjustment towards equilibrium is 88% annually. Therefore, convergence to the long-run equilibrium will be faster in the non-EU SEE countries (Table 5).

Table 5: Panel ARDL Short-Run Results

| Variable | Coefficient | Std. Error | t-Statistic | p |
|-------------------------|-------------|------------|-------------|------|
| EU Countries | | | | |
| ECT | -0.58** | 0.27 | -2.18 | 0.03 |
| D(VA) | 4.42 | 11.18 | 0.39 | 0.69 |
| D(PS) | 4.86 | 7.29 | 0.67 | 0.51 |
| D(GE) | 1.95 | 1.70 | 1.15 | 0.26 |
| D(RQ) | 7.77 | 7.01 | 1.11 | 0.27 |
| D(RL) | -11.69 | 14.79 | -0.79 | 0.43 |
| D(CC) | -10.13 | 15.62 | -0.65 | 0.52 |
| C | 18.06** | 8.72 | 2.07 | 0.04 |
| Non-EU Countries | | | | |
| ECT | -0.88** | 0.34 | -2.61 | 0.01 |
| D(VA) | -15.81* | 5.74 | -2.76 | 0.01 |
| D(PS) | 0.60 | 1.42 | 0.42 | 0.67 |
| D(GE) | 2.76 | 7.42 | 0.37 | 0.71 |
| D(RQ) | 16.74** | 8.23 | 2.03 | 0.05 |
| D(RL) | -6.21 | 14.41 | -0.43 | 0.67 |
| D(CC) | -6.99 | 6.92 | -1.01 | 0.32 |
| C | 5.29*** | 2.72 | 1.94 | 0.06 |

Note: Author’s calculation in EViews 10. Dependent variable: GDP. * significant at the 1% level; ** significant at the 5% level; *** significant at the 10% level.

Furthermore, there is no short-run relationship between economic growth and the six dimensions of governance in EU member SEE countries, while there is a short-run relationship between economic growth and regulatory quality and voice and accountability in non-EU SEE countries.

The results also show that there is a negative short-run relationship between economic growth and voice and accountability. The result is in line with the results obtained for the long-run relationship and those obtained by Gani (2011). Moreover, the results show that there is a positive short-run relationship between economic growth and regulatory quality in non-EU countries that is opposed to the results obtained for the long-run relationship (Table 4). However, the results are in line with those obtained by Shapkova and Disoska (2017) for transition countries and by Han et al. (2014).

5. CONCLUSION

The study examines the long-run and short-run relationship between economic growth and institutional quality, measured through six dimensions of governance for ten SEE countries (five EU members and five non-EU members) from 1996 to 2017. The panel ARDL test results show a long-run relationship between institutional quality and economic growth in EU countries, with all six dimensions of governance being significant, while in the non-EU countries only government effectiveness, political stability and absence of violence, regulatory quality, and voice and accountability are statistically significant. Therefore, Hypothesis 1 – that there is a long-run relationship between economic growth and institutional quality in both EU and non-EU SEE countries – is partially proven. Furthermore, the results show that there is no short-run relationship between institutional quality and economic growth in the EU countries, while regulatory quality and voice and accountability are significant in the non-EU SEE countries. Hypothesis 2 – that there is a short-run relationship between economic growth and institutional quality in both EU and non-EU SEE countries – is also partially proven. Hypothesis 3 – that in response to a short-run shock the convergence to the long-run equilibrium will be faster in the EU member SEE countries than in the non-EU SEE countries – is rejected because the results of the panel ARDL model show that the error correction term is -0.58 for EU member SEE countries, and -0.88 for non-EU SEE countries, indicating that the speed of adjustment towards equilibrium is higher in the non-EU member SEE countries.

The results of the research show that there is a long-term and a short-term relationship between the quality of institutions and economic growth, which should show economic policymakers that to achieve economic growth in SEE countries, more attention should be paid to the quality of institutions. Furthermore, the findings for institutional quality in EU member states reveal the challenges and issues that non-EU countries should overcome before joining the EU. The results of the research show that non-EU member states should focus their actions on increasing their control of corruption because this indicator of the institutional quality has the strongest positive effect on economic growth in the long run in EU member states. Depending on data availability, future research could be extended to more country groups and could compare and apply quality indicators to other institutions. It would also be useful to include countries with

higher levels of development to highlight differences between developed and developing countries.

REFERENCES

- Acemoglu, D. & J. Robinson (2010). The role of institutions in growth and development. *Review of Economics and Institutions*, 1(2), 1–33.
- Bartlett, W., Čučković, N., Jurlin, K., Nojković, A. & Popovski, V. (2013). *Institutional quality and growth in EU neighbourhood countries. WP5/11 SEARCH Working Paper*. Barcelona: AQR-IREA Research Group, University of Barcelona.
- Barro, R. J. (1997). *Determinants of Economic Growth: A Cross-Country Empirical Study*. Cambridge, MA: MIT Press.
- Djankov, S., Glaeser, E., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2003). The new comparative economics. *Journal of Comparative Economics*, 31(4), 595–619.
- Durović, G. (2016). *Evropska unija i Crna Gora*. Podgorica: EU Info Centar.
- Efendić, A. (2010). Efikasnost institucija kao determinanta ekonomskog razvoja BiH i napretka na putu EU integracija. *X international seminar: Corporate Governance – Pravać ekonomskog oporavka BiH*. Sarajevo: Fond Otvoreno Društvo BiH.
- Elster, J., Offe, C. & Preuss, U. (1998). *Institutional Design in Post-Communist Societies: Rebuilding the Ship at Sea*. Cambridge: Cambridge University Press.
- Gani, A. (2011). Governance and growth in developing countries. *Journal of Economic Issues*, 45(1) 19–40.
- Hall, R. & Jones, C. I. (1999). Why do some countries produce so much output per worker than others? *Quarterly Journal of Economics*, 114, 83–116.
- Han, X., Khan, H. & Zhuang, J. (2014). Do governance indicators explain development performance? A cross-country analysis. *ADB Economics Working Paper Series*. Mandaluyong: Asian Development Bank.
- Im, K.S., Pesaran, MH, & Shin, Y. (1997). Testing for unit roots in heterogeneous panels. *DAE Working Paper 9526*. Cambridge: University of Cambridge.
- Iqbal, N. & Daly, V. (2014). Rent-seeking opportunities and economic growth in transitional economies. *Economic Modelling*, 37, 16–22.

- Jakopin, E. (2018). Privredni rast i institucionalna tranzicija Republike Srbije. *Ekonomski horizonti*, 20(2), 95–108.
- Kao, C. (1999). Spurious regression and residual-based tests for cointegration in panel data. *Journal of Econometrics*, 90(1), 1–44.
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2008). Governance matters VII: Aggregate and individual governance indicators, 1996–2007. *World Bank Policy Research Working Paper, No 4654*. Washington, DC: The World Bank
- Kaufmann, D., Kraay, A. & Mastruzzi, M. (2011). The worldwide governance indicators: Methodology and analytical issues. *Hague Journal on the Rule of Law*, 3, 220–246.
- Knack, S. & Keefer, P. (1995). Institutions and economic performance: Cross-country tests using alternative institutional measures. *Economics and Politics*, 7(3), 207–227.
- Maksimović, Lj. (2012). Sistemska ograničenja konkurentnosti privrede Srbije. *Ekonomski horizonti*, 14 (2), 99–109.
- Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics* 110(3), 681–712.
- Murphy, K. M., Shleifer, A. & Vishny, R. W. (1993). Why is rent-seeking so costly to growth? *The American Economic Review*, 83(2), 409–414.
- Nawaz, S., Iqbal, N. and Khan, M. A. (2014). The Impact of Institutional Quality on Economic Growth: Panel Evidence. *The Pakistan Development Review*, 53(1), 15–31.
- North, D. (1990). *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.
- North, D. C. (1991). Institutions, *Journal of Economic Perspectives*, 5(1), 97–112.
- Penev, S. & Rojec, M. (2014). The future of FDI in South-Eastern European countries: Messages from new EU member states. *Economic Annals*, 59 (202), 43–67.
- Pesaran, M. H., Shin, I. & Smith, R. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association*, 94, 621–634.
- Pesaran, M. H. (2004). General diagnostic tests for cross-section dependence in panels. *CESifo Working Papers, No.1233*. Munich: CESifo GmbH.
- Račić, Ž. i Pavlović, M. (2012). Analiza globalnog indeksa konkurentnosti Republike Srbije. In N. Vukmirović, M. Bajić, & Lj. Pašić (Eds.). *Tehnološke inovacije generatora privrednog razvoja* (pp. 16–24). Banja Luka : Savez inovatora Republike Srpske.
- Radulović, M. (2018). Institucionalna ograničenja konkurentnosti privrede Republike Srbije u procesu priključivanja EU. In V. Leković, & P. Veselinović (Eds.). *Zbornik radova Naučnog skupa*

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Institucionalne promene kao determinanta privrednog razvoja Republike Srbije (pp. 397–415).
Kragujevac : Ekonomski fakultet Univerziteta.

Rodrik, D. (2008). Second-best institutions. *American Economic Review: Papers & Proceedings*, 98(2): 100–104.

Samarasinghe, T. (2018). Impact of Governance on Economic Growth. *MPRA Paper No. 89834*.
Munich: Munich Personal RePEc Archive.

Shapkova, K. K. & Disoska, E. M. (2017). Influence of trade and institutions on economic growth in transitional economies: evidences from countries from Central and Eastern Europe and Western Balkans. *Economic Analysis*, 50(3–4), 32–42.

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