

INSTITUTIONAL QUALITY AND ECONOMIC GROWTH: EVIDENCE FROM DEVELOPING COUNTRIES

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Abstract

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This research aims to study the role of institutions in promoting employment and economic growth for a sample of eight Balkan countries over the period 2000–2022. Based on the cointegration technique by Pedroni (2004), fully modified ordinary least squares (FMOLS) and the dynamic ordinary least squares (DOLS) method by Kao and Chiang (2001) determined the potential long-run relationship between variables. The results suggest the existence of a positive and significant relationship between institutions and economic growth. We also found that education supported growth, and unemployment has restricted growth. The conclusion is that further improving institutional quality and education is necessary for supporting growth and employment.

Keywords: Institutional Impact, Economic Development, Labor Institutions

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1. INTRODUCTION

In the framework of the European Union (EU) accession, the Western Balkan countries are implementing important institutional reform. These reforms aim to establish democracy, ensure justice, fight corruption, and approximate the national legislation with the EU legislation. The main challenge for institutional reforms is to be embedded in the country's social context in order to function properly and sustain economic growth. The political system that a country applies impacts the institutional framework and economic performance. In the Western Balkan countries, the transition to a democratic system started in 1991. Democratic trends are not the same for the whole region, and democracy is not significantly improving. According to the Global State of Democracy Index in 2022, Kosovo, Montenegro, and North Macedonia are classified as mid-range performing democracies, Albania and Bosnia and Herzegovina are classified as weak democracies, and Serbia as a hybrid regime. Political instability and the inability to successfully implement medium-term reforms have hindered job creation in the region.

The Western Balkan countries have significant economic potential but are facing social risks associated with a high unemployment rate, inefficient labour market institutions, and high level of corruption. Improving education in the region is not significantly reflected in increasing employment. The informal labour market, quality of education, and skill mismatch affect the well-functioning of the labour market. The region has a high youth unemployment rate.

The labour market institutions do not work independently but are part of a country's institutional framework. Participation in the labour market and the quality of workers are important determinants of economic growth. Labour market institutions impact the supply of labour. Labour market institutions that support economic growth encourage the mobility of workers and risk-taking from low-growth firms to high-growth firms in the structural transformation of the economy. Labour supply conditions are unfavourable in the region (Oruč & Bartlett, 2017). Weak labour market outcomes, low wages, and poor job inclusiveness for youth are factors that constrain the labour market in Albania and give strong

incentives to emigrate (Honorati et al., 2018). Based on the study by the Organisation for Economic Co-operation and Development (OECD, 2021) on labour migration in the Western Balkan countries, corruption and political instability were determined as the most important reasons for leaving the country, followed by better employment opportunities.

Good governance improves economic growth. Recent studies provide evidence of a positive relationship between governance and growth in developing and emerging economies. For five BRICS countries, Misi Lopes et al. (2023) used principal component analysis to build an aggregate index of good governance based on the six World Governance Indicators to estimate the impact of governance on real gross domestic product (GDP) growth. A review of the linkages between governance and growth is done by Ivanyna and Salerno (2021). The spatial regression model is used by Mahran (2023) to estimate the impact of governance on growth for 116 countries in 2017. Other studies are focused on the long-run relationship between governance and growth, such as Yahyaoui and Bouchoucha (2021) for African countries, and Lustrilanang et al. (2023) and Shah (2023) for Asian countries.

This study builds on previous research and contributes to the literature by examining the long-run relationship between economic growth and institutional quality for the eight Balkan countries. Institutional reform in these countries aims to create functional democratic institutions to support EU integration. In this work, we rely on the regulatory quality index from the World Governance Indicators to estimate the impact of institution quality on growth. To consider the effect of labour market institutions on growth, we use the unemployment rate. Labour market institutions should promote quality employment and reduce the unemployment rate.

The research methodology for panel data estimation is based on fully modified ordinary least squares (FMOLS) and dynamic ordinary least squares (DOLS). The FMOLS model accounts for the endogeneity of the explanatory variables and considers autocorrelation and heteroskedasticity, while the DOLS model considers the correlation between the regressor and the error term.

The rest of the paper is structured as follows. Section 2 reviews the relevant literature on the impact of institutions on economic growth. Section 3 analyses the research methodology used to conduct empirical research on the impact of institutions on growth. This work, based on panel unit root test and panel cointegration regression, relies on FMOLS and DOLS models to investigate the potential long-term effect of institutions on growth. Section 4 presents the result of the study. Section 5 contains a detailed discussion. Section 6 highlights the study's conclusions.

2. LITERATURE REVIEW

Institutions are defined as “rules of the game in a society, humanly devised that shape human interaction” (North, 1990, p. 3). The impact of institutional quality on growth is empirically analysed by many authors who have determined institutional quality as a key factor for economic

development (Li et al., 2007; Zareva, 2004; Falcetti et al., 2001; Bruinshoofd, 2016; Kebede & Takyi, 2017; Boğa-Avram et al., 2018; Shchegolev & Hayat, 2018; Yinusa et al., 2020; Tran et al., 2021). The authors have provided evidence that political stability, government effectiveness, public spending on education, control of corruption, and property rights are important determinant factors for economic growth. Improving governance is considered a potential factor for economic development (Zhuang et al., 2010).

Both political and economic institutions have a positive impact on growth. Political institutions decide on inclusive economic institutions (Barro, 1996; Samarasinghe, 2019). Economic and regulatory institutions directly support economic growth. Based on the analysis of developed and developing countries for the period from 1975 to 2005, Flachaire et al. (2014) have found evidence that political institutions are a determinant factor for long-term growth.

The role of economic institutions on growth is analyzed by Acemoglu and Robinson (2010). The authors have determined that economic institutions are a very important factor for economic growth because they influence investment in both physical and human capital. Evidence that institutions have improved economic development at all stages of economic development is found by Abu-Ismaïl and Ishak (2021), based on annual data from 1996 to 2017 for developed and developing countries. The causality patterns between institutions and economic performance vary at different stages of income level according to Recuero and González (2019) and Law et al. (2013). Other authors, such as Glaeser et al. (2004), provided evidence that the causal link between institutions and economic growth is difficult to determine.

The role of property rights in economic performance is analysed by Zak (2002). The author has found evidence that insecure property rights deter economic growth. The role of economic institutions in growth is enhanced by factors such as a country's openness to foreign trade, investment, and financial flows (Lehne et al., 2014). A positive link between the quality of institutions and growth was found by Aron (2000), but the impact was not significant. In recent research, Aslam et al. (2021) found that the contribution of institutional quality to inclusive growth is not strong for middle-income countries and low-income countries. The poor quality of law, order, justice, governance, and control of corruption affects the way the way institution's function. Improvement in institutions has a positive statistically significant positive impact on the growth rate of per capita GDP (Acquah et al., 2023).

Participation in the labour market is a very important growth determinant. The aim of labour market institutions is to deliver stable employment, productivity, and adequate protection to workers. The performance of labour market institutions in each country is the result of many factors and they cannot be analyzed out of the context of all the institutions that a country applies. Wage autonomy, co-determination, labour law, and working time law are determined by Grömling and Klös (2019) as important labour institutions.

The role of regulation in the labour market and the welfare state is considered fundamental for greater equality between groups in a society (Berg, 2015). Labour market institutions should facilitate the expansion of high-growth firms via decentralized and individualized wage-setting and portable job tenure rights (Henrekson, 2020).

Long-term unemployment and youth unemployment impose a serious burden on growth. The labour market in the Western Balkans is analysed by Kovtun et al. (2014). The authors have found that the problems in the Western Balkan countries have structural roots. Evidence of economic growth not related to the reduction of unemployment in Kosovo is provided by Misini and Mustafa (2022).

Social capital and social structures of a country are also very important factors that support economic growth. Social capital investment is strongly driven by education level. Countries with higher social capital have a higher share of government spending on education as a share of GDP. Government investment in education is considered an important growth determinant (Glaeser, 2002; Ponzetto & Troiano, 2018). The quality of education is more important than the quantity of education for economic growth (Barro, 2001). Education is, according to Easterly (2006), an important policy for enhancing social cohesion. The author provided evidence that social cohesion determines the quality of institutions, which in turn has important impacts on growth. The significant and positive effect on economic growth of human development is confirmed by

Uddin et al. (2021). Based on cross-country data, Easterly (2001) confirmed the middle-class consensus. A higher share of income for the middle class and lower ethnic polarization are empirically associated with higher growth, more education, better economic policies, and more democracy. The importance of the existence of a broad middle class and the social capital for economic growth is confirmed by Josten (2013).

Economic structures and institutions reinforce each other. Economic structures are the fundamental cause of long-run growth, according to Constantine (2017). Based on U.S. data, evidence is provided that robust growth is realized when a country acquires an increasing return's economic structure. Factor accumulation and production efficiency influence the quality of a nation's institutions, including the government policy-making process (Blanchard, 2006). Bad government policies accumulate less capital and fail to use the capital they have as efficiently as they might.

3. RESEARCH METHODOLOGY

This study aims to investigate the long-run relationship between institutional quality and economic growth in eight Balkan countries. The research methodology is based on FMOLS and DOLS estimation, proposed by Phillips and Hansen (1990) and Stock and Watson (1993), and the contribution of Kao and Chiang (2001).

The estimated growth regression has the form:

$$GDPR_{it} = \beta_0 + \beta_1 TRADE_{it} + \beta_2 INV_{it} + \beta_3 DEBT_{it} + \beta_4 UNEMP_{it} + \beta_5 EDU_{it} + \beta_6 RREG_{it} + \varepsilon_{it} \quad (1)$$

The independent variable is the growth rate of real GDP, denoted as *GDPR*.

The institutional measure is the variable that measures the regulatory quality of the government, denoted as *RREG*, sourced from the World Governance Indicators. The variables range from -2.5 (weak) to 2.5 (strong) governance performance. Regulatory quality is a key aspect of improving regulation that promotes private sector development. An increase in the government regulatory quality is expected to increase the growth rate. In this paper, a governance index based on the six dimensions of the World Governance Indicators is not constructed because the components are highly correlated.

As a proxy for the quality of labour institutions, the unemployment rate is denoted as *UNEMP*. An increase in unemployment is expected to decrease the country's growth rate.

Control variables include:

1) The country's openness to foreign trade, measured as the value of imports and exports as a percentage of GDP, denoted as *TRADE*. An increase in the country's openness to foreign trade is expected to increase the country's growth rate;

2) Total investment as a percentage of GDP is denoted as *INV*. An increase in total investment is expected to increase the country's growth rate;

3) Total debt as a percentage of GDP is denoted as *DEBT*. The expected impact on growth is negative. Total debt to GDP increased after the global financial crisis in all the countries, and the situation of public

finance deteriorated further in response to the COVID-19 pandemic. High public debt adversely affects growth through many channels, such as an increase in long-term interest rates, inflation, and higher future taxes.

Expected years of schooling, denoted as *EDU*, is a proxy variable for education and is part of the Human Development Index. The expected impact on economic growth is positive.

All the variables are introduced in the model in logarithmic form. The coefficient estimated can be interpreted as long-term elasticities. The unit root tests are determined based on the Levin, Lin, and Chu test, Im, Pesaran, and Shin test, ADF-Fisher test, and PP-Fisher test. Cointegration tests are employed to identify the presence of long-run relationships based on Pedroni (1999, 2004). The cointegration equation estimation is based on FMOLS and DOLS models. Both models, FMOLS and DOLS, address the problem of endogeneity and eliminate small sample bias; therefore, they are preferred over the DOLS estimators.

The paper considers the effects of the global financial crisis and the COVID-19 pandemic on economic growth by adding two dummy variables to the model. Dummy *GFC* represents the global financial crisis and takes the value of one for the period 2008-2012, and zero otherwise. The negative impact of the global financial crisis lasted for a time. Dummy *COVID-19* takes the value of one only for the year 2020 and zero otherwise. The recovery started for all countries immediately

after the lockdown was over. The impact of both crises is expected to be negative and statistically significant on growth. The impact of the COVID-19 pandemic on growth is expected to be higher due to the lockdown of the countries in the year 2020.

The study is based on annual data for the period 2000–2022 for eight Balkan countries: Albania, North Macedonia, Montenegro, Serbia, Bosnia and Herzegovina, Bulgaria, Romania, and Croatia. Descriptive statistics are reported in Table A.1 in the Appendix.

4. RESULTS

The findings of the panel unit root test are reported in Table A.2 and Table A.3 in the Appendix, at the level and the first difference. The data supports that all the variables are stationary at the first difference, or integrated of first order. The existence of cointegration is confirmed using the Pedroni (1999, 2004) panel cointegration test. The results are reported in Table A.4 in the Appendix.

Since the long-run cointegration relationship between variables is proved, we conduct the regression analysis based on FMOLS and DOLS models. The results are reported in Table 1. The first regression is estimated with the pooled OLS method, which assumes that there is no difference among the estimated cross-sections (eight countries under survey). The second regression report is FMOLS estimation, and the third regression report is DOLS estimation.

Table 1. Estimated regression: Dependent variable growth rate of real GDP

Variable	Panel OLS (1)	FMOLS (2)	DOLS (3)
Trade openness (TRADE)	0.086*** (0.000)	0.114*** (0.000)	0.110*** (0.000)
Investment (INV)	0.037*** (0.000)	0.034*** (0.000)	0.031*** (0.001)
Government debt (DEBT)	-0.026** (0.014)	-0.030*** (0.001)	-0.021** (0.011)
Unemployment (UNEMP)	-0.065*** (0.001)	-0.030*** (0.000)	-0.079*** (0.001)
Education (EDU)	0.103 (0.405)	0.088 (0.435)	0.0501 (0.656)
Institutional measure (RREG)	0.0399* (0.0437)	0.093** (0.003)	0.081** (0.008)
Dummy (GFC)	-0.017*** (0.001)	-0.019*** (0.000)	-0.013** (0.008)
Dummy (COVID-19)	-0.068*** (0.000)	-0.059*** (0.000)	-0.065*** (0.000)
C	0.038 (0.148)		
Adj. R ²	0.561	0.621	0.557
DW	1.872	2.096	1.924

Note: *p*-values are in brackets. *, **, and *** are significant level at 10%, 5%, and 1%, respectively.

All the variables have the expected sign according to economic theory. The coefficients estimated from FMOLS and DOLS models are close and have the same sign and significance.

The institutional variable, the regulatory quality of the government index, has a small positive impact on economic growth that is also statistically significant in all the estimated regressions. An improvement of one per cent in the regulatory quality index of the government increases about 0.08 per cent the growth rate of real GDP according to the DOLS model and about 0.09 according to

the FMOLS model, *ceteris paribus*. Further improving regulatory quality will accelerate economic growth.

Trade openness and investment have supported economic growth. The impact is strong and statistically significant in all the estimated regressions. The expected year of education is not statistically significant, but the impact on growth is positive.

Unemployment has a negative impact on economic growth in accordance with macroeconomic theory and Okun's law first presented in 1960 (Okun, 1962). Based on the estimated models, total debt to GDP has a negative and robust impact on growth.

The effect of a global financial crisis captured by a dummy variable is statistically significant. The decline of economic activity was sharper during the COVID-19 pandemic, and the recovery started immediately after the lockdown. The negative impact on the growth rate is captured by the second dummy variable, which is statistically significant and has a higher coefficient relative to the dummy variable that considers the effect of the global financial crisis.

5. DISCUSSION

This research provides evidence of a long-run relationship between the regulatory quality of the government index and growth for eight Balkan countries. The results are in accordance with previous empirical studies that have determined the quality of governance as the main economic growth determinant for a large panel of data (Olson et al., 2000; Mahran, 2023).

The role of labour market institutions on growth is proxied in this paper by the unemployment rate. This research proves that the unemployment rate has a negative and statistically significant effect at the one per cent level of significance on the growth rate. Evidence of the negative relationship between unemployment and growth is provided by Kukaj (2018) for the Western Balkan countries for the period 2001–2015. Skills mismatch is a widespread phenomenon, especially in the Western Balkan countries, and has its roots in the quality of the education system and the ability to adapt to new skills required by the labour market. Expected years of schooling, a proxy for education, has no significant expected impact on growth. Other studies for the Western Balkan countries, such as Eric (2018), proved the existence of a higher correlation between higher education and GDP per capita but the inverse relationship of the population with formal education.

The study confirmed that trade openness and investment are strongly associated with economic growth, in line with previous studies (Bacchetta et al., 2021; Popovic et al., 2020). This study provides evidence that a one per cent increase in trade openness is associated with about a 0.11 per cent increase in the growth rate of real GDP according to both FMOLS and DOLS models, *ceteris paribus*.

The total debt to GDP ratio has increased in all Balkan countries after the global financial crises. The COVID-19 pandemic deteriorated public finance of the government by increasing both public debt

and fiscal deficit. The paper proved that a one per cent increase in debt to GDP ratio decreases the growth rate of real per capita GDP by about 0.03 per cent according to FMOLS and about 0.021 per cent according to the DOLS model. Consolidation of public finance is the policy that should support long-run economic growth.

6. CONCLUSION

The study contributes to the investigation of institutional and economic development using a sample of eight Balkan counties over the period 2000–2022. The study proved the existence of a significant and positive relationship between institutions and economic growth. Improving institutional quality will further sustain the long-run economic growth. The labour market institutions in the Western Balkan and the legislation are in accordance with the EU, but unemployment in the region is high and adversely affects economic growth. For the labour market institutions, it remains challenging to create high-skill jobs and follow structural transformation of the economy.

The paper found that total debt as a percentage of GDP has a negative and statistically significant effect on economic growth. The total debt to GDP ratio has grown significantly after the global financial crises. Fiscal consolidation after the COVID-19 crisis

should not cut the government expenditure on social protection and education, as social cohesion is good for sustainable growth. Increasing the quality of education to fulfil the requirements of the labour market is necessary for supporting long-run growth. Considering that government expenditure on education in the Western Balkan countries is less than four per cent of GDP, lower than the EU average of about 5 per cent, governments should increase investment in education to improve skills and competencies, foster labour productivity, and sustain economic growth.

The study does not take into consideration the labour market informality, due to the lack of data for the period under consideration. Informal employment remains a big concern for the developing countries. Informality weakens the role of labour market institutions especially related to law enforcement and inspections.

Further research including more institutional variables, such as the economic freedom index of the Heritage Foundation, corruption perception index (CPI), or ease of doing business, could offer more insight into the relationship between institution and growth. The study is focused on the long-run relations between institutions and growth, and in the short term, the relationship might be different.

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APPENDIX

Table A.1. Descriptive statistics

Variable	No.	Mean	St Dev	Max.	Min.	Data Source
LGDP	177	0.030	0.037	0.123	-0.166	World economic outlook
TRADE	177	0.896	0.204	1.485	0.225	World development indicators
INV	177	0.246	0.058	0.473	0.092	World economic outlook
DEBT	177	0.460	0.241	2.138	0.044	World economic outlook
UNEMPL	177	0.184	0.092	0.435	0.043	World economic outlook
RREG	177	0.148	0.364	0.734	-0.857	The worldwide governance indicators (WGI)
EDU	177	13.691	1.166	15.661	10.589	Human Development Index, UNDP

Table A.2. Panel unit root test in levels

	GDP	TRADE	INV	DEBT	UNEMP	RREG	EDU
<i>Null: Unit root (assumes common unit root process)</i>							
Levin, Lin & Chu t*	-4.653 (0.000)	-1.648 (0.049)	-1.466 (0.071)	-0.346 (0.365)	1.134 (0.871)	-1.034 (0.150)	-3.831 (0.000)
<i>Null: Unit root (assumes individual unit root process)</i>							
Im, Pesaran and Shin W-stat	-1.084 (0.139)	-1.035 (0.150)	-2.758 (0.003)	-0.471 (0.319)	0.966 (0.833)	-0.477 (0.317)	-1.577 (0.057)
ADF-Fisher Chi-square	20.511 (0.198)	21.751 (0.151)	32.443 (0.009)	16.208 (0.439)	13.872 (0.608)	20.305 (0.207)	23.099 (0.111)
PP-Fisher Chi-square	22.171 (0.138)	35.950 (0.003)	23.035 (0.113)	21.003 (0.178)	6.3106 (0.984)	31.891 (0.010)	36.510 (0.003)

Note: Probabilities are given in parentheses for Fisher tests, using an asymptotic Chi-square distribution.

Table A.3. Panel unit root test first difference

	GDP	TRADE	INV	DEBT	UNEMP	RREG	EDU
<i>Null: Unit root (assumes common unit root process)</i>							
Levin, Lin & Chu t	-7.966 (0.000)	-15.892 (0.000)	-4.234 (0.000)	-4.959 (0.000)	-5.368 (0.000)	-8.097 (0.000)	-3.581 (0.000)
<i>Null: Unit root (assumes individual unit root process)</i>							
Im, Pesaran and Shin W-stat	-7.269 (0.000)	-13.752 (0.000)	-4.131 (0.000)	-5.310 (0.000)	-4.427 (0.000)	-7.346 (0.000)	-2.987 (0.001)
ADF-Fisher Chi-square	76.864 (0.000)	179.300 (0.000)	43.340 (0.000)	59.532 (0.000)	47.479 (0.000)	77.012 (0.000)	37.865 (0.001)
PP-Fisher Chi-square	76.539 (0.000)	273.306 (0.000)	74.365 (0.000)	71.838 (0.000)	41.839 (0.000)	144.370 (0.000)	37.613 (0.002)

Note: Probabilities are given in parentheses for Fisher tests, using an asymptotic Chi-square distribution.

Table A.4. Pedroni residual cointegration test

Test	<i>Alternative hypothesis: Common AR coeffs. (within-dimension)</i>					
	No deterministic trend		Deterministic intercept and trend		No deterministic intercept or trend	
	Statistic	Weighted statistic	Statistic	Weighted statistic	Statistic	Weighted statistic
Panel v-Statistic	2.941 (0.002)	2.090 (0.018)	2.267 (0.012)	0.965 (0.167)	1.490 (0.068)	1.279 (0.100)
Panel rho-Statistic	-0.323 (0.373)	-0.133 (0.447)	0.722 (0.765)	0.487 (0.687)	-1.4269 (-1.427)	-1.335 (0.091)
Panel PP-Statistic	-9.846 (0.000)	-11.557 (0.000)	-13.756 (0.000)	-13.441 (0.000)	-8.490 (0.000)	-8.681 (0.000)
Panel ADF-Statistic	-8.137 (0.000)	-9.056 (0.000)	-8.074 (0.000)	-8.554 (0.000)	-7.638 (0.000)	-7.585 (0.000)
<i>Alternative hypothesis: Individual AR coeffs. (between-dimension)</i>						
Group rho-Statistic	1.034 (0.850)		1.607 (0.946)		-0.280 (0.390)	
Group PP-Statistic	-18.338 (0.000)		-22.933 (0.000)		-10.725 (0.000)	
Group ADF-Statistic	-10.614 (0.000)		-8.878 (0.000)		-8.202 (0.000)	

Note: Null hypothesis (H₀): No cointegration