

## FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH: EVIDENCE FROM WESTERN BALKAN COUNTRIES

**Argjira Bilalli\***  
**Artenisa Beka\*\***  
**Atdhetar Gara\*\*\***

---

### ABSTRACT

*This research paper aims to empirically analyze the relationship between economic growth and financial development, in the region of Western Balkan countries, over the period 2010–2020. The relationship is demonstrated by the effects of independent variables such as trade (T), inflation consumer prices (ICP), general government final consumption (GGFCE), domestic credit to the private sector (DCPS), broad money (BM), and the real interest rate (IR), on the dependent variable, such as GDP growth.*

*Hence, to evaluate this impact, we employed the regression model. Although, a correlation matrix is presented to identify the relationship between the study variables. Based on the results presented, there is a positive relationship between trade, inflation rate, and interest rates. Additionally, based on the regression results that were produced using the fixed effect technique, it can be seen that trade (T), inflation (ICP), interest rates (IR), and domestic credit to the private sector (DCPS), positively impact economic growth.*

*The main objective of this paper is to contribute to a better understanding of this connection and draw new conclusions that might greatly benefit policymakers and the Western Balkan community, by considering the fundamental role of the financial sector in sustainable economic growth. The study's second objective is to fill the vac-*

---

\* Argjira Bilalli, Faculty of Business and Economics, “Southeast European University”, Tetovo, North Macedonia; [argjirabilalli88@gmail.com](mailto:argjirabilalli88@gmail.com).

\*\* Artenisa Beka, Faculty of Business and Economics, “Southeast European University”, Tetovo, North Macedonia; [artenisaabeka@gmail.com](mailto:artenisaabeka@gmail.com).

\*\*\* Atdhetar Gara, Faculty of Business and Economics, “Southeast European University”, Tetovo, North Macedonia; [atdhetargara@hotmail.com](mailto:atdhetargara@hotmail.com).

*uum in the literature for this period and a sample of counties according to specific macroeconomic variables.*

**KEYWORDS:** *financial development; economic growth; inflation consumer prices; real interest rates; broad money; domestic credit to the private sector; general government final consumption; trade; Western Balkan.*

---

## 1. INTRODUCTION

Financial development is considered a fundamental element to promote sustainable economic growth. Economists are strong proponents of financial development because it can effectively influence direct or indirect economic welfare. Well-developed financial market channels an economy's savings to profitable investments and creates preconditions for efficient capital allocation. The accumulation of capital and the enhancement of technological capabilities are two additional channels via which financial development influences growth. Further, the achievement of economic goals, which may be long-term, such as development and sustainable growth, or short-term, such as stabilization of the economy in response to unexpected and unanticipated occurrences called economic stocks, is typically how economic performance is evaluated. Long-term economic goals include things like development and sustainable growth. Short-term economic goals include things like the stabilization of the economy, Khramov & Lee<sup>1</sup>, Giovannini, Iacopetta, & Minetti<sup>2</sup>, argue that financial development helps economic organizations in the aspect of improving risk management, encouraging innovation, and reducing information costs. These elements raise investment volume and enhance capital allocation efficiency, both of which support economic growth. As a result, there is ongoing discussion over this connection, which is particularly crucial for transitional countries given their historical background. In Western Balkan Countries, the banking sector operates based on policies and regulations that vary across economies and over time and may have different implications. Their preliminary entry into the market has brought about significant benefits for the industry and the economy as a whole. Despite this, many challenges and unfavorable conditions have afflicted the banking industry, the majority of which were caused by the underdevelopment of crucial institutional support for the development of the

---

<sup>1</sup> Khramov, V., & Lee, J. R.: The Economic Performance Index (EPI), an intuitive indicator for assessing a country's economic performance dynamics from a historical perspective. International Monetary Fund, 2013.

<sup>2</sup> Giovannini, A., Iacopetta, M., & Minetti, R.: Financial markets, banks, and growth: Disentangling the links, *Revue de l'OFCE*, 131(5), 2013, [<https://doi.org/10.3917/reof.131.0105>], p.105-147.

banking and financial sectors. The relevant nations have begun implementing a variety of initiatives to simplify and increase banking sector transparency. However, it is worth noting that the process is still a challenge. Structural changes are also implemented towards stifling corruption and removing bureaucratic barriers that hinder the progress of private enterprises. Conducting this topic, King<sup>3</sup>, stated that a country's level of financial development can be used to predict how much capital will be accumulated and how effectively capital will be allocated. According to the findings of this study, which analyzed data spanning 80 nations and the years 1960–1989, economic growth is positively correlated with financial development. As a result, they supported the idea that financial development contributes to economic growth and argued that governments should put in place effective policies to promote the development of this sector. Numerous studies have recently examined the financial system's stabilizing function and its nonlinear impact on economic expansion. Creel, Hubert, & Labondance<sup>4</sup> by using a generalized method of moments (GMM) on a data set comprised of countries that are members of the European Union for the years 1998–2011, found out that financial instability, in general, is detrimental to the operation of the macroeconomic system. Further, Deidda & Fattouh, 2002<sup>5</sup>, Arcand, Berkes, & Panizza<sup>6</sup>, and Cecchetti<sup>7</sup>, hypothesized that the connection is expressed in the form of an upside-down U. According to the results of these studies, there is no correlation between the magnitude of the financial sector and the expansion of the economy in countries that have major financial systems. There is some evidence that suggests a positive association between countries that have financial systems that are either small or medium in size; however, this correlation has only been discovered to some extent. In terms of methodology, a regression model is executed using the fixed effect technique, over the period 2010-2020. The paper's second paragraph offers a summary of the literature; the third section discloses the empirical analysis; section four discusses the data and the econometric approach, and the final section presents some observations and conclusions made by the authors.

---

<sup>3</sup> King, R., & Levine, R.: Finance and growth: Schumpeter might be right, *Quarterly Journal of Economics*, 108, 1993, [https://doi.org/10.2307/2118406], p. 717-737.

<sup>4</sup> Creel, J., Hubert, P., & Labondance, F.: Financial stability, and economic performance, *Economic Modelling*, 48(C), 2015, [https://doi.org/10.1016/j.econmod.2014.10.025], p. 25-40.

<sup>5</sup> Deidda, L., & Fattouh, B.: Non-linearity between finance and growth., *Economics Letters*, 74(3), 2002, [https://doi.org/10.1016/S0165-1765(01)00571-7], p. 339-345.

<sup>6</sup> Arcand, J. L., Berkes, E., & Panizza, U.: Too much finance? , *International Monetary Fund*.

<sup>7</sup> Cecchetti, S. G.: Why does financial sector growth crowd out real economic growth? , *BIS Working Paper 490, Basel, Switzerland: Bank for International Settlements*, 2015, [https://doi.org/10.1111/manc.12295].

## **2. LITERATURE REVIEW**

There are a great number of studies that demonstrate the impact that financial development has on economic growth. The issue has been the subject of a variety of empirical studies conducted over the years, and these studies have produced a variety of results regarding the impact that financial development has on economic growth<sup>8</sup>. This analysis originates from measures such as total credit and interest spread, as indices of financial development, and found evidence that financial development “leads” economic growth, either directly or indirectly. Their research<sup>9</sup> analyzes the fact that there is a positive association between financial development and economic growth and that the extent of this relationship varies with different financial development. Another study made by Mitchell<sup>11</sup> emphasized that the majority of government spending has a negative economic impact, but if the government spends money productively and with a high enough rate of return, the economy would benefit. This was discovered utilizing government expenditure as a financial development, on the other hand<sup>10</sup>, conducted that government spending is beneficial to economic growth. Also,<sup>11</sup> found that education influences economic growth, by using several variables for the quantity and quality of education<sup>12</sup>. Additionally, the author concluded that financial development has an important role in economic growth, by considering productivity and trade, as two factors that indicate the favorable effect on this relationship namely, financial development and economic growth.

Furthermore, the link between these two macroeconomic variables differs amongst nations with low, moderate, and high incomes,<sup>13</sup> found strong long-run linkages between financial development and economic growth, the same

---

<sup>8</sup> Shan, J., & Morris, A.: Does Financial Development ‘Lead’ Economic Growth?, *International Review of Applied Economics* 16, no. 2, 2002, [<https://doi.org/10.1080/02692170110118885>], p. 153-168.

<sup>9</sup> Calderón, C., & Liu, L.: The direction of causality between financial development and economic growth *Journal of development economics*, 72(1), 2003, [[https://doi.org/10.1016/S0304-3878\(03\)00079-8](https://doi.org/10.1016/S0304-3878(03)00079-8)], p. 321-334.

<sup>10</sup> Wu, S.-Y., Tang, J.-H., & S.Lin, E.: The impact of government expenditure on economic growth: How sensitive to the level of development? , *Journal of Policy Modeling*, 32(6), 2010. [<https://doi.org/10.1016/j.jpolmod.2010.05.011>]

<sup>11</sup> Cooray, A. V.: *The Role of Education in Economic Growth*, 2009, [<https://doi.org/10.20990/kilisiibfakademik.1151440>]

<sup>12</sup> Leitão, N. C.: Financial development and economic growth: A panel data approach, *Theoretical and Applied Economics*, 2010, p.15-24

<sup>13</sup> Hassan, M. K., BenitoSanchez, & Jung-SukYuc.: Financial development and economic growth: New evidence from panel data, *Quarterly Review of Economics and Finance*, 51 (1), 2011, [<https://doi.org/10.1016/j.qref.2010.09.001>], p. 88-104.

author also emphasized that there has been a positive association between financial development and economic growth for developing countries, but contradictory results for high-income countries. However, their empirical analysis for middle- and low-income countries seems to suggest that efficient systems may boost economic growth in these countries.<sup>14</sup> By using a GMM model, showed that financial development and real GDP per capita, are positively and strongly linked. Some other studies analyzed the relationship that financial development has on economic growth in emerging markets Ekmekçioğlu<sup>15</sup>, Valickova, Havranek, & Horvath<sup>16</sup>, performed a meta-regression analysis to see the effect of financial development on economic growth, based on their results they concluded a positive link between these two indicators Muhammad, Islam, & Marshdeh<sup>17</sup>, obtained a robust finding of consistently, a strong positive effect of financial sector development (FSD) on the economic growth of the GCC region, by using the GMM model. Fetai, Mustafi, & Fetai<sup>18</sup>, determined that foreign direct investment, domestic credit to the private sector, and gross savings all have a positive effect on per capita growth. On the other hand, government final consumption has a negative relationship with growth, and furthermore, schooling is not considered a significant factor for growth, in respective Countries. While<sup>19</sup> countries with higher levels of government expenditure emphasizing the expenditures on health tend to have higher levels of economic growth.<sup>20</sup> examined that final consumption, exports, and foreign

---

<sup>14</sup> Hassene Ben Mbarek, H. R.: The Causality between Financial Development and Economic Growth: Panel Data Cointegration and GMM System Approaches, *International Journal of Economics and Finance*, 3(1), 2011, P.143-151.

<sup>15</sup> Ekmekçioğlu, E.: The Relationship between Financial Development and Economic Growth in Emerging Markets, *International Journal of Arts and Commerce*, 1(4), 2012, p. 29-34.

<sup>16</sup> Valickova, P., Havranek, T., & Horvath, R.: Financial development and economic growth: A meta-analysis. *Journal of economic surveys*, 29(3), 2015, [https://doi.org/10.1111/joes.12068], p. 506-526.

<sup>17</sup> Muhammad, N., Islam, A. R., & Marshdeh, H. A.: Financial development and economic growth: An empirical evidence from the GCC countries using static and dynamic panel data, *Journal of Economics and Finance*, 40(4), 2016, [https://doi.org/10.1007/s12197-015-9331-9], p. 773-791.

<sup>18</sup> Fetai, B. T., Mustafi, B. F., & Fetai, A. B.: An empirical analysis of the determinants of economic growth in the Western Balkans. *Scientific annals of economics and business*, 64(2), 2017, https://doi.org/10.1515/saeb-2017-0016]

<sup>19</sup> Qehaja, S. S., Qehaja, D., Arber, H. O. T. I., & Marovci, E.: The relationship between government health expenditure and economic growth: Evidence from western Balkan countries. *International Journal of Applied Economics, Finance and Accounting*, 15(1), 2023, [https://doi.org/10.33094/ijaefa.v15i1.724].

<sup>20</sup> Toska, A., & Fetai, B. (2023): The Impact of E-Commerce on the Economic Growth of the Western Balkan Countries: A Panel Data Analysis. *Planning*, 18(3), 2023, [https://doi.org/10.18280/ijstdp.180329], p. 935-941.

direct investment positively impact economic growth. Moreover, the study also, confirmed that the increased government expenditure does not contribute to economic growth in the countries located in the Western Balkan, for the period 2008-2022, by using panel data techniques. Further, Durusu-Ciftci, Ispir, & Yetkiner<sup>20</sup>, implied that financial development plays a fundamental role in economic growth<sup>21</sup> and indicated that while finance has a bigger beneficial impact in more developed nations, it has a weaker impact in nations with a lower level of trade openness.<sup>22</sup>, in their study, found out that all of the selected banking development indicators positively affect economic growth when the turnover ratio is present<sup>23</sup>, demonstrating that improvements in the financial sector have a large and beneficial impact on the expansion of the economy. Also,<sup>24</sup> examined a positive relationship between economic growth and financial development emphasizing that economic growth as a whole is influenced by financial development, particularly when private credit is used as a proxy for it, the analysis included Western Balkan Countries for the period 2005-2019 by applying vector autoregression VAR approach.

### **3. FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH: AN EMPIRICAL ANALYSIS FOR WESTERN BALKAN COUNTRIES**

This study uses secondary data extracted from the World Bank Database which contains panel data for the six Western Balkan countries, and the period generated is for 11 years, namely, from 2010 to 2020. Moreover, the results are generated through the STATA program. Methodologically, we employ an applicable panel data model that is the Fixed Effect Method (FEM), by allowing the intercept to vary for each cross-section, this model can take into consideration each specific effect and the second method applied is the Random Effect method (REM), instead of treating the intercepts as fixed constants, considers them as random variables. The intercepts are thought to be independent of the

---

<sup>21</sup> Botev, J., Égert, B., & Jawadi, F.: The nonlinear relationship between economic growth and financial development: Evidence from developing, emerging and advanced economies. *International Economics*, 160, 2019, [<https://doi.org/10.1016/j.inteco.2019.06.004>], p. 3-13

<sup>22</sup> Guru, B. K., & Yadav, I. S.: Financial development and economic growth: panel evidence from BRICS, *Journal of Economics, Finance and Administrative Science*, 24(47), 2019, [<https://doi.org/10.1108/JEFAS-12-2017-0125>], p.113-126.

<sup>23</sup> Sarwar, A., Khan, M. A., & Zahid Sarwar, W. K.: Financial development, human capital, and its impact on the economic growth of emerging countries. *Asian Journal of Economics and Banking.*, 2020, [<https://doi.org/10.1108/AJEB-06-2020-0015>]

<sup>24</sup> Vangjel, R., & George, B.: BALKAN FINANCIAL DEVELOPMENT AND ITS IMPACT ON ECONOMIC GROWTH: GRANGER CAUSALITY. *Journal of Governance and Regulation/Volume*, 11(4), 2022, [<https://doi.org/10.22495/jgrv11i4art6>].

error term and also, mutually independent. Further, for comparison purposes, we apply the Hausman test to choose the reliable model between the Fixed and Random Effects. We, therefore, report only the fixed-effects model results. Further, is presented the structure of the econometric model applied in this study and also the equation created when we substitute the variables used. According to our estimates, GDP Growth (GDP) is the dependent variable of the model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mu_i \quad (1)$$

$$\text{GDPG} = a + \beta (T) + \beta (\text{ICP}) + \beta (\text{GGFCE}) + \beta (\text{DCPS}) + \\ + \beta (\text{BM}) + \beta (\text{RIR}) + \mu_i \quad (2)$$

Additionally, the respective hypotheses are derived with the sole purpose of achieving the objectives of the study, and these are as follows:

$H_{1,0}$ : Financial development has no impact or significant effect on economic growth

$H_{1,1}$ : Financial development has an impact or significant effect on economic growth

It is worth noting that the hypotheses achieved are supported by the relevant studies done in this field, namely, financial development and economic growth; some of them have been disclosed in the literature reviews paragraph for different sample countries and years by using different methodological approaches.

#### **4. DATA AND RESEARCH METHODOLOGY**

We used cross-country regressions and a dynamic panel model to include annual data from the World Bank database (WB), for Western Balkan countries: Kosovo, Albania, North Macedonia, Bosnia and Herzegovina, Montenegro, and Serbia, for a period of 11 years, from 2010 to 2020.

**Table 1. Definition of variables**

Variable	Abbreviation	Measure	Source
GDP growth	GDPG	annual %	WB
Trade	T	% of GDP	WB
Inflation, consumer prices	ICP	annual %	WB
General government final consumption expenditure	GGFCE	% of GDP	WB
Domestic credit to the private sector	DCPS	% of GDP	WB
Broad Money	BM	% of GDP	WB
Real Interest rate	RIR	%	WB

The table above presents the definition of the study variables, so we have a total of seven variables, six of them independent and the source of the secondary data is the World Bank Database.

**Table 2. Descriptive statistics of the variables**

Variable	Obs.	2000-2020		2000-2019	
		Mean	Std. Dev.	Mean	Std. Dev.
GDPG	66	2.01	3.3	2.78	1.79
T	66	93.66	16.59	94.02	15.9
ICP	66	1.91	2.25	2.05	2.29
GGFCE	66	16.61	3.88	16.54	3.90
DCPS	66	47.33	8.42	46.89	8.38
IR	66	5.47	2.47	5.57	2.49
BM	66	58.4	13.96	57.30	13.62

Additionally, descriptive statistics are shown for the whole research period, with the year 2020 excluded because of the significant standard deviations brought on by the global crisis as a result of COVID-19, which is regarded as an outlier. When 2020 is excluded as an exception, the average economic growth in the individual counties for this period namely, 2010-2020, rises to 2.78%.



According to the data presented, the level of trade in this region is satisfactory, with an average of 93.66% of the value of the gross domestic product (GDP) of the states included in the sample. Worth noting that this high trade has been influenced by the manageable rate of inflation, which on average throughout the decade recently was only 1.91%. Further, the region of the Western Balkans is characterized by government consumption expenditures, with an average of 16.61% of the total value of the gross domestic product (GDP).

Regarding these financial indicators presented, the average credit of the private sector is 47.33%, where the real interest rate on these loans is 5.47%. While the money supply managed by the state institutions of these countries is on average 58.4% of the value of their gross domestic product.

**Table 3. Matrix of correlations**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) GDPG	1.00						
(2) T	0.03	1.00					
(3) ICP	0.06	-0.13	1.00				
(4) GGFCE	-0.29	0.33	-0.06	1.00			
(5) DCPS	-0.32	0.38	-0.27	0.84	1.00		
(6) IR	0.02	-0.36	-0.04	-0.29	-0.20	1.00	
(7) BM	-0.18	-0.27	-0.28	-0.26	-0.06	0.04	1.00

The table above presents the analysis of the correlation matrix, which is presented to identify the relationship between the study variables. Based on the results generated and presented in this table, there is a positive relationship between trade ( $r=0.03$ ), inflation rate ( $r=0.06$ ), and interest rate ( $r=0.02$ ), with economic growth. Meanwhile, there is a negative relationship between economic growth and government spending on consumption ( $r=-0.29$ ), private sector lending ( $r=-0.32$ ), and money supply ( $r=-0.18$ ). To determine how the factors listed above will affect economic growth, the results of the econometric model will be discussed in the section that follows.

**Table 4. Analysis of regression results**

<b>GDPG</b>	<b>Coef.</b>	<b>St.Err.</b>	<b>t-value</b>	<b>p-value</b>	<b>[95% Conf</b>	<b>Interval]</b>	<b>Sig</b>
<b>T</b>	.011	.016	-0.66	.508	-.042	.021	
<b>ICP</b>	.226	.101	-2.24	.025	-.423	-.028	**
<b>GGFCE</b>	-.324	.12	-2.70	.007	-.558	-.089	***
<b>DCPS</b>	.048	.056	0.85	.394	-.062	.157	
<b>IR</b>	.157	.093	-1.69	.091	-.339	.025	*
<b>BM</b>	-.045	.018	-2.52	.012	-.081	-.01	**
<b>Constant</b>	10.849	2.458	4.41	0	6.031	15.666	***
Mean dependent var	2.785		SD dependent var	1.791			
Overall r-squared	0.296		Number of obs	60			
Chi-square	22.308		Prob > chi2	0.001			
R-squared within	0.170		R-squared between	0.684			
*** p<.01, ** p<.05, * p<.1							

The table above presents the generated regression results, the results presented in this table are executed using the fixed effect technique since we have panel data, then corresponding tests (Hausman Test) were also executed, the result of which (P= 0.000), suggests the selected model.

We conclude that the model in question shows a level of significance. According to the results of the P value of the variables, 4 variables of the study show a level of significance for economic growth at different levels of significance.

Trade has a positive impact on economic growth, with a coefficient of 0.01. Also, the inflation rate has a positive impact on economic growth, with a coefficient of 0.22, which is significant at the 5% level. It's feasible that economic growth will benefit from inflation if it's maintained under control, through channels like savings and investment. According to the results presented in the table, domestic credit to the private sector has a positive impact on economic growth, with a coefficient of 0.04, consists of the Fetai, Mustafi, & Fetai, 2017<sup>25</sup>, as well as the interest rate, with a coefficient of 0.15, significant at the 10% significance level. Based on our generated results, a negative impact on economic growth have government expenditures with a

<sup>25</sup> Fetai, B. T., Mustafi, B. F., & Fetai, A. B.: An empirical analysis of the determinants of economic growth in the Western Balkans. *Scientific Annals of Economics and Business*, 64(2), 2017, [<https://doi.org/10.1515/saeb-2017-0016>], p. 245-254.

coefficient of 0.32, a coefficient that shows a significant level at 1%. States aim to allocate funding to areas that encourage economic development, assure budgetary sustainability, or reduce social concerns such as unemployment Qehaja, Gara, & Qorraj<sup>26</sup>, while in respective countries the allocation of funds results inefficiently. Additionally, the research of Tran & Thi<sup>27</sup>, and Mitchell<sup>28</sup>, shows that government spending has a negative impact on economic growth. The money supply also has a negative impact with a coefficient of 0.04 which is also significant at the 5% level. According to the results, the hypothesis is accepted that financial development has an impact on economic growth.

## **5. CONCLUSION**

The cornerstone of any nation's prosperity is economic growth thus, the relevant study tends to investigate empirically that impact, measured by selecting macro-economic variables that show a strong correlation between them and evaluated by applying a regression model. Emphasizing that results are executed using the fixed effect technique since we have panel data. Moreover, the selected model corresponds with the p-value derived by tests respectively, the Hausman Test. Notable is the fact that four of the six independent variables (domestic lending to the private sector, interest rates, trade, and inflation rate), which considered to have a positive impact on the economic growth of the respective counties.

This effect, however, varies not only over time but also across countries. Our findings strongly suggest that the efficient functioning of a financial system is the main channel of transmission from financial development to economic growth; therefore, policymakers must keep under control the variables that can destabilize the financial sector.

In addition, government spending should be divided in a manner that is advantageous to a particular field. This should be a genuine expense with a future return that is effective and secure. Measured actions aimed at keeping the inflation rate stable that will not imply economic variables including interest rates, trade, broad money, and the economy in general.

---

<sup>26</sup> Qehaja, D., Gara, A., & Qorraj, G.: Allocation of government expenditures in sectors and their impact on economic growth - Case Study: Western Balkan Countries, *INTEREU-LAWEAST: Journal for the international and European law, economics and market integrations*, 9(1), 2022, [<https://doi.org/10.22598/iele.2022.9.1.2>], p. 33-50.

<sup>27</sup> Tran, N. P., & Thi, P. T.: The Impact of Financial Development on Economic Growth: Empirical Evidence from Transitional Economies. *The Journal of Asian Finance, Economics, and Business*, 8(11), vol8.no11.019, 2021, [<https://doi.org/10.13106/jafeb>], p. 191-201.

<sup>28</sup> Mitchell, D. J.: *The Impact of Government Spending*. The Heritage Foundation, 1813, 2005, p. 1-18.

Further, strengthening the financial sector is necessary for all of the sampled countries to enable them to effectively carry out all of their functions, such as the mobilization and distribution of funds and the diversification of risk.

Although this study has some limitations and further research, in the future may include more variables such as stock market capitalization, initial income per capita, and reform index of financial institutional development also, the analysis can be expanded by including more countries and years. Additionally, in the aspect of missing data, the moving average method (with factor 2) can be used to supplement some of those missing observations. Moreover, the study can incorporate some other applicable panel data methods like OLS, OLS Robust, GMM, etc.

## **LITERATURE**

1. Arcand, J. L., Berkes, E., & Panizza, U. (2012). Too much finance? International Monetary Fund.  
– DOI: <https://doi.org/10.2139/ssrn.2127541>
2. Botev, J., Égert, B., & Jawadi, F. (2019,). The nonlinear relationship between economic growth and financial development: Evidence from developing, emerging and advanced economies. *International Economics*, 160,3-13.  
– DOI: <https://doi.org/10.1016/j.inteco.2019.06.004>
3. Calderón, C., & Liu, L. (2003). The direction of causality between financial development and economic growth. *Journal of development economics*, 72(1), 321-334.  
– DOI: [https://doi.org/10.1016/S0304-3878\(03\)00079-8](https://doi.org/10.1016/S0304-3878(03)00079-8)
4. Cecchetti, S. G. (2015). Why does financial sector growth crowd out real economic growth? (BIS Working Paper 490). Basel, Switzerland: Bank for International Settlements.  
– DOI: <https://doi.org/10.1111/manc.12295>
5. Cooray, A. V. (2009). The Role of Education in Economic Growth. Available at SSRN 1520160.  
– DOI: <https://doi.org/10.20990/kilisiibfakademik.1151440>
6. Creel, J., Hubert, P., & Labondance, F. (2015). Financial stability and economic performance. *Economic Modelling*, 48(C), 25-40.  
– DOI: <https://doi.org/10.1016/j.econmod.2014.10.025>
7. Deidda, L., & Fattouh, B. (2002). Non-linearity between finance and growth. *Economics Letters*, 74(3), 339-345.  
– DOI: [10.1016/S0165-1765\(01\)00571-7](https://doi.org/10.1016/S0165-1765(01)00571-7)
8. Durusu-Ciftci, D., Ispir, M. S., & Yetkiner, H. (2017). Financial development and economic growth: Some theory and more evidence. *Journal of policy modeling*, 39(2), 290-306.  
– DOI: [https://doi.org/10.1016/S0165-1765\(01\)00571-7](https://doi.org/10.1016/S0165-1765(01)00571-7)

9. Ekmekçioğlu, E. (2012). The Relationship between Financial Development and Economic Growth in Emerging Markets . *International Journal of Arts and Commerce*, 1(4), 29-34.
10. Fetai, B. T., Mustafi, B. F., & Fetai, A. B. (2017). An empirical analysis of the determinants of economic growth in the Western Balkans. *Scientific annals of economics and business*, 64(2).  
– DOI: <https://doi.org/10.1515/saeb-2017-0016>
11. Giovannini, A., Iacopetta, M., & Minetti, R. (2013). Financial markets, banks, and growth: Disentangling the links. *Revue de l'OFCE*, 131(5), 105-147.  
– <https://doi.org/10.3917/reof.131.0105Guru>,
12. B. K., & Yadav, I. S. (2019). Financial development and economic growth: panel evidence from BRICS. *Journal of Economics, Finance and Administrative Science*, 24(47), 113-126.  
– DOI: <https://doi.org/10.1108/JEFAS-12-2017-0125>
13. Hassan, M. K., BenitoSanchez, & Jung-SukYuc. (2011). Financial development and economic growth: New evidence from panel data. *Quarterly Review of Economics and Finance*, 51 (1) , pp. 88-104.  
– DOI: <https://doi.org/10.1016/j.qref.2010.09.001>
14. Hassene Ben Mbarek, H. R. (2011). The Causality between Financial Development and Economic Growth: Panel Data Cointegration and GMM System Approaches. *International Journal of Economics and Finance*, 3(1), 143-151.  
– DOI: <https://doi.org/10.5539/ijef.v3n1p143>
15. Khan, M. S., & Senhadji, A. S. (2003). Financial Development and Economic Growth: A Review and New Evidence. *Journal of African Economies*, 12(suppl\_2), ii89-ii110.  
– DOI: [https://doi.org/10.1093/jae/12.suppl\\_2.ii89](https://doi.org/10.1093/jae/12.suppl_2.ii89)
16. Khramov, V., & Lee, J. R. (2013). The Economic Performance Index (EPI): an intuitive indicator for assessing a country's economic performance dynamics in an historical perspective. *International Monetary Fund*.  
– DOI: <https://doi.org/10.5089/9781484381298.001>
17. King, R. &. (1993). Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics*, 108, 717-737.  
– DOI: <https://doi.org/10.2307/2118406>
18. Leitão, N. C. (2010). Financial development and economic growth: A panel data approach. *Theoretical and Applied Economics*, 15-24.
19. Mitchell, D. J. (2005). The Impact of Government Spending. *The Heritage Foundation*, 1813, 1-18.
20. Muhammad, N., Islam, A. R., & Marashdeh, H. A. (2016). Financial development and economic growth: an empirical evidence from the GCC countries using static and dynamic panel data. *Journal of Economics and Finance*, 40(4), 773-791.  
– DOI: <http://dx.doi.org/10.1007/s12197-015-9331-9>

21. Qehaja, D., Gara, A., & Qorraaj, G. (2022). Allocation of government expenditures in sectors and their impact on economic growth - Case Study: Western Balkan Countries. *InterEULawEast: journal for the international and european law, economics and market integrations*, 9(1), 33-50.  
– DOI: <https://doi.org/10.22598/iele.2022.9.1.2>
22. Qehaja, S. S., Qehaja, D., Arber, H. O. T. I., & Marovci, E. (2023). The relationship between government health expenditure and economic growth: Evidence from western Balkan countries. *International Journal of Applied Economics, Finance and Accounting*, 15(1).  
– DOI: <https://doi.org/10.33094/ijaefa.v15i1.724>
23. Sarwar, A., Khan, M. A., & Zahid Sarwar, W. K. (2020). Financial development, human capital and its impact on economic growth of emerging countries. *Asian Journal of Economics and Banking*.  
– DOI: <https://doi.org/10.1108/AJEB-06-2020-0015>
24. Shan, J., & Morris, A. (2002). Does Financial Development ‘Lead’ Economic Growth? *International Review of Applied Economics* 16, no. 2 (2002): 153-168.  
– DOI: <https://doi.org/10.1080/02692170110118885>
25. Toska, A., & Fetai, B. (2023). The Impact of E-Commerce on the Economic Growth of the Western Balkan Countries: A Panel Data Analysis. *Planning*, 18(3), 935-941.  
– DOI: <https://doi.org/10.18280/ijjdp.180329>
26. Tran, N. P., & Thi, P. T. (2021). The Impact of Financial Development on Economic Growth: Empirical Evidence from Transitional Economies. *The Journal of Asian Finance, Economics and Business*, 8(11), 191-201.  
– DOI: <https://doi.org/10.13106/jafeb.2021.vol8.no11.0191>
27. Valickova, P., Havranek, T., & Horvath, R. (2015). Financial development and economic growth: A meta-analysis. *Journal of economic surveys*, 29(3), 506-526.  
– DOI: <https://doi.org/10.1111/joes.12068>
28. Vangjel, R., & George, B. (2022). BALKAN FINANCIAL DEVELOPMENT AND ITS IMPACT ON ECONOMIC GROWTH: GRANGER CAUSALITY. *Journal of Governance and Regulation*/Volume, 11(4).  
– DOI: <https://doi.org/10.22495/jgrv11i4art6>
29. Wu, S.-Y., Tang, J.-H., & S.Lin, E. (2010). The impact of government expenditure on economic growth: How sensitive to the level of development? *Journal of Policy Modeling*, 32(6).  
– DOI: <https://doi.org/10.1016/j.jpolmod.2010.05.011>