

# MACROECONOMIC DETERMINANTS OF INVESTMENT IN THE BALKAN COUNTRIES

---

1 Jelena Bjelić, Indirect Taxation Authority, Bosnia and Herzegovina/Doctoral student at  
University of Banja Luka, Faculty of Economics

2 Ognjen Erić, Faculty of Economics, University of Banja Luka, Bosnia and Herzegovina

3 Slaviša Kovačević, Faculty of Economics, University of Banja Luka, Bosnia and Herzegovina

\*Corresponding author E-mail: [ognjen.eric@ef.unibl.org](mailto:ognjen.eric@ef.unibl.org)

1 ORCID ID: [0000-0001-9412-2006](https://orcid.org/0000-0001-9412-2006)

2 ORCID ID: [0000-0002-5318-9543](https://orcid.org/0000-0002-5318-9543)

3 ORCID ID: [0000-0001-8133-5838](https://orcid.org/0000-0001-8133-5838)

---

## ARTICLE INFO

Original Scientific Paper

Received: 15.11.2021

Revised: 26.11.2021

Accepted: 28.11.2021

doi [10.7251/ACE2135019B](https://doi.org/10.7251/ACE2135019B)

UDC

[339.727.22:338.22\(497-15\)](https://doi.org/339.727.22:338.22(497-15))

---

Keywords: *investment, gross savings, indebtedness, GDP, FDI, interest rate, the Balkans.*

JEL Classification: E20, F21, H60, O52.

---

## ABSTRACT

This study analyzes the impact of crucial macroeconomic variables on investments for six selected Balkan countries (Croatia, Serbia, Bosnia and Herzegovina, Montenegro, North Macedonia and Albania) in the period from 2005 to 2020. Most of these countries are on the path to European integration, and Croatia has been a member of the EU since 2013. Their development and macroeconomic goals are mostly identical, and one of the main is the requirement of a high level of investment in order to achieve higher growth rates and overcome the development gap in relation to EU countries. The research starts from the hypothesis that the selected factors (independent variables): gross savings, FDI, interest rate, GDP growth and external debt, affect the total investments in the region. To prove this hypothesis, a panel analysis model was applied, that is the panel with a fixed effect as a more relevant model for estimation. The results show that savings and external debt are significant variables, whereby savings have a positive impact on investment, while the impact of public debt is negative. Real interest rates also determine investment, which is shown by their marginal significance and negative numbers. In other words, higher interest rates discourage investment. Finally, the analysis shows that GDP growth is not significant, but the direction is logical and slightly encourages investment. Foreign investments are also an insignificant variable, but they have a positive direction, which explains why the deficit of domestic investments is only partially compensated through the FDI.

© 2021 ACE. All rights reserved

---

## 1. INTRODUCTION

Economic development depends on a number of factors. It can be observed from the general growth equation that the factors that lead to an increase in GDP are: funds (capital accumulation), labor, technical advancements, natural resources and residual factors. A number of factors influence the accumulation of capital, but the level of domestic savings, i.e. domestic investments, and the inflow of foreign investments have a significant impact as well. The level of savings is also a measure of well-being of society. However, saving also depends on the activities of state institutions that can encourage it, or treat it as inferior. Certainly, preferences, traditions, and customs in the community are also important. Therefore, with more or less initiative, it is possible to create national macroeconomic policies with the aim of stimulating the growth of savings as domestic savings are the most favorable resource for accelerating economic growth. In this context, governments use different means to encourage domestic savings, although interest rates have proven to be the most effective instruments for stimulating savings.

Investments are a significant constituent of the essential balance equation, as well as a condition for achieving higher and dynamic long-term GDP growth rates. This can be seen from the decomposition of GDP, i.e. the balance equation:

$$C + S + T = C + I + G + (X - Z) \quad (1)$$

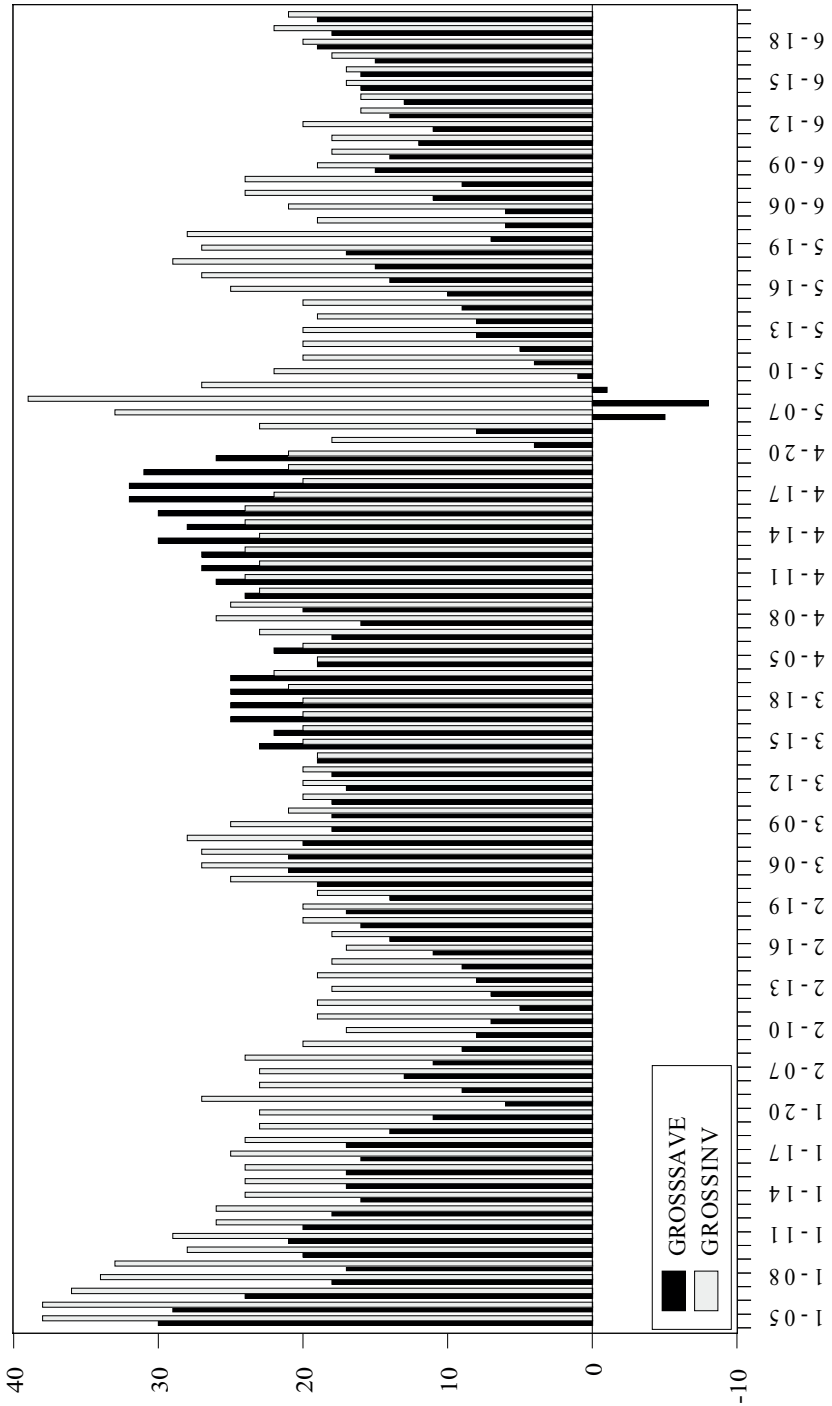
Rearranging the equation results in:

$$(S - I) + (T - G) = (X - Z) \quad (2)$$

With the variables being: C – aggregate consumption; S – savings; I – investments; T – transfers; G – government expenditure; (X – Z) – foreign trade balance (import - export).

The second equation shows the importance of investments for a national balance, because they can equate to more or less than the savings. If the invested amount is larger than domestic savings, the balance equation is corrected through the foreign trade deficit ( $X < Z$ ). And if the savings are greater than investments, the private sector is a net saver, while the economy has a foreign trade surplus. This simplified review of the relationship between investment and savings clearly shows their connection and roles in economic growth.

At a time of stability of the global economy, investments make up about 1/5 of the GDP. Thus, the rate of investment in the countries of the European Union



Note: The countries studied are found on the abscissa marked 1-6 in the following order: 1-Albania, 2-B&H, 3-Croatia, 4-North Macedonia, 5-Montenegro, 6-Serbia.

**Graph 1.** Ratio of investments and savings in the Balkan countries (GDP%, 2005-2020)

Source: [World Bank, 2021](#)

averaged about 20% of GDP before the economic crisis flared up, while after 2009 it decreased slightly (17-18%) (Popović & Erić, 2021). WB countries also have approximately the same investment rates, which are to some extent financed by domestic savings. The investment and savings gap varies from country to country, as seen in the following chart. It is obvious that the ratio of these two macroeconomic indicators is similar for Albania, B&H, Serbia, and Montenegro, while the gap between investments and savings in Croatia and North Macedonia is so small that after 2012 savings even exceeded gross investments.

The chart shows that in almost the entire period, savings are lower than investments. As these countries have been recording foreign trade deficits for a longer period of time, it can be concluded that this relation converges with the theoretical setting from the previous balance equation. Or rather, it turns out that  $S < I$  has an effect on  $X < Z$ .

Scientific research on the relationship between investment, savings and economic growth for the countries of the Western Balkans is generally very rare. The one standing out is Bađun & Franić (2015), who investigated the determinants of an extremely important category of housing savings in Croatia for the period 2000–2013. The results of the research showed that the analyzed variables: salaries, interest rate, stock exchange index, availability of loans and unemployment rate, do not affect the volume and dynamics of housing savings. Housing savings showed independence from recession and the economic decline, while being dependent on government incentives. They are also resistant to institutional change, so government interventions can disrupt the savings system. In general, savings depend on the level and growth of GDP, but also on consumption. Radulescu, Serbanescu & Sinisi (2019) investigated how much the growth rate and employment of CEE countries depended on consumption and investment in the period 2004-2017. Research showed that private consumption is positively associated with short-term economic growth, but not with employment growth. The impact of domestic investment on GDP growth is weaker than the impact of private and public spending. It is positively correlated with GDP growth and negatively with the unemployment rate. The correlation between FDI and economic growth is very weak. The authors found that economic growth in CEE is largely based on private consumption in the short run. On the other hand, private consumption does not encourage short- and long-term employment either. Investments and savings also depend on the state of the banking sector. Kubiszevska (2019) studied the economic situation and the banking sector of selected European countries. She explored the economic transformation of the banking sector and banking stability in the Western Balkans region and provided an assessment of the determinants of banking stability. She found that in most

countries the key factors of banking stability are market concentration (size) and market competition. The stability of the banking systems in Croatia and Serbia is affected by similar factors, while other banking systems in the region differ in terms of factors that lead to banking stability.

Along with savings and the banking system at the macroeconomic level, economic stability and growth, and thus the amount of savings, are also affected by the state of the budget, that is, its stability. Rant, Mrak & Marinč (2020) explored the budget flows of the Western Balkan countries in the context of the enlargement process. EU budget flows to the Western Balkans after accession showed a sharp increase in gross and net tranches in the first few years. The enlargement of the Western Balkans had minimal budgetary costs for EU members. The impact of public debt was studied by Madžar (2019). He analyzed the arguments for public debt for large projects and the equalization of public spending flows. He believes that high public debt undermines the power of the state and creates mistrust in the economy. His research states insufficient participation of public investments in the GDP in Serbia (about ½ of the participation in neighboring countries). The author notices problems in investments on part of the government. The problem are the reforms of the economy, but also the reforms of the government itself.

Cvetanović, Despotović & Milovanović (2018), and Popović & Erić (2018) researched the economic growth of the Western Balkan countries in the context of the influence of FDI. The research deals with the inflow of foreign direct investments for the period 2000-2017. The authors conclude that these countries are forced to use foreign investments due to insufficient domestic savings. They are one of the conditions for achieving higher and more stable GDP growth rates. They found that after the crisis in 2009, growth rates were insufficient, so FDIs were a supplement to domestic accumulation. However, they are not a permanent development resource, and the domestic savings of the Western Balkan countries even show to be significantly lower.

Petrović (2019) analyzed quantitative and qualitative growth factors in the context of attracting FDI to Serbia. Foreign investment is beneficial for economic growth and general social progress. Serbia invests large amounts of budget funds into attracting FDI. This paper also reviews the following incentive measures: donations from the budget, fiscal measures in special economic zones and fiscal incentives. Mihajlović (2018), Mencinger, (2003) and Erić (2018) emphasized the importance of foreign investments in the economic development of countries. They see them as an alternative in conditions of a capital and domestic accumulation deficit.

Investments in WB are also discussed in an extensive study by IMF (Atoyan et al., 2018). The need to invest in WB is also analyzed, with special reference to the development of public infrastructure. They identify and quantify shortcomings in several sectors, as well as “limiting factors” that require investment in infrastructure. The study quantifies the benefits that will be the result of investing in infrastructure. The authors conclude that building infrastructure in the WB is vital to higher GDP growth rates and faster entry into the EU.

World Bank (2017) also examined the regional investment policies of the Western Balkan countries and their compliance with international standards. Their economies need to be further developed and they need to cover various technicalities, as well as promote attractiveness for foreign investment. They need to meet the requirements of corporate investors more efficiently. The economies of the Western Balkans must increase the region’s appeal for foreign investments. The trade integration of the region also stimulates strongly FDI inflows due to market growth. Likewise, the growing presence of multinational companies contributes to the growth of trade and investment.

Investments are increasingly becoming a geoeconomic as well as a geopolitical instrument. China’s influence is increasing in the Western Balkans region. First of all, the economic role is growing through the intensive growth of trade and investment. Markovic Khaze & Wang (2021) investigated China’s economic impact on the Western Balkans over the past decade. They analyze the investments and trade between China and the countries of the Western Balkans in individual cases of Croatia, Serbia, Albania and North Macedonia. Russia’s economic presence is growing as well, especially in the energy industry. The delay in joining has enabled Russia to strengthen its influence in the region. This situation was inspected further by Panagiotou (2021). Russia’s economic presence (although less than that of the EU) has proven to be successful, and more importantly, there has been continued growth and expansion of cooperation.

Therefore, the future economic activity of the EU, as the largest foreign trade and investment partner, is necessary for further progress in the expansion process.

## 2. MATERIALS AND METHODS

The database used for analysis in this paper is World Development Indicators (WDI) from which data on dependent and explanatory variables is taken. Explanations and definitions of the variables are presented in the following table and the continuation below.

**Table 1.** Variables in the model and statistics sources

	Label in the model	Source of data
A) Dependent variable		
1. Gross investments (% GDP)	Gross inv.	World Bank national accounts data, WDI
B) Explanatory variables		
2. Gross savings (% GDP)	Gross save	World Bank national accounts data, WDI
3. Growth of the gross domestic product	GDP growth	World Bank national accounts data, WDI
4. Foreign direct investments	FDI	World Bank national accounts data, WDI
5. Countries' external debt	External debt	World Bank national accounts data, WDI
6. Real interest rates	Interest rates	World Bank national accounts data, WDI

Source: Created by authors, using data from (World Bank, 2021).

1. Gross fixed capital formation (formerly gross domestic investment) includes land improvements (fences, canals, drains, etc.); purchase of industry plants, machinery and equipment; construction of roads, railways, etc., including schools, hospitals, private housing units, and commercial and industrial buildings. According to the 1993 SNP, net acquisitions of valuables are also considered a form of investment.

2. Gross savings are calculated as the total consumption subtracted from the gross national income, plus net transfers.

3. Annual GDP growth rate percentage per capita based on local currency.

4. FDIs are net investment inflows for the acquisition of a permanent management interest (10 per cent or more of the voting shares) in an enterprise operating in the economy not domiciled to the investor. It is the sum of equity, reinvested earnings, other long-term capital and short-term capital, shown in the balance of payments. This data shows the net entries into the observed economy from foreign investors, and are put in relation to the GDP.

5. Total external debt stocks by gross national income. Total external debt is debt to non-residents that is repaid in currency, goods or services. Total external debt

is the sum of public, publicly guaranteed and private guaranteed long-term debt, the use of IMF loans and short-term debt. Short-term debt includes all debts with an original maturity of one year or less and arrears of interest on long-term debt. Gross national income GNI (former GNP) is the sum of the added value of all resident producers plus all taxes on products (with subsidies subtracted) not included in the valuation of production plus net receipts of primary income (compensation of employees and property income) from abroad.

6. The real interest rate is the interest rate on loans, adjusted for inflation, measured by the GDP deflator. Terms and conditions related to credit rates vary from country to country, which limits their comparability.

The econometric method, used to estimate the intensity and direction of the relationship of dependent and explanatory variables is panel analysis. The panel analysis assesses the impact of selected predictor and control variables (explanatory) on total investments. The advantage of panel analysis over multiple regression is that it allows the definition and testing of complicated econometric models (Baltagi, 2015). Moreover, panel data reduces the problem of multicollinearity. There are combined panel models, with fixed and random effect. The paper explains panels with fixed and random effect, while the combined model will not be presented due to numerous limitations.

The fixed-effect model is a linear model in which a constant factor changes with each unit of observation while being constant in time.

The random effect model is a simple linear model in which it is assumed that the observation units are chosen at random, and that the differences between the observation units are random. The results of the application of the panel model are presented in the next chapter.

### **3. RESULTS AND DISCUSSIONS**

Prior to the formation of the econometric model, the correlation between pairs of explanatory variables was examined due to possible multicollinearity. This problem can disrupt the estimation of parameter values, their significance, and the direction of impact on the dependent variable. To date, there is no appropriate test for detecting multicollinearity in panel models. According to Baltagi (2008; 2015), empirical papers using panel models to observe multicollinearity problems employ correlation coefficients between pairs of potentially independent variables.



**Table 2.** Correlation matrix of variable values in the model

	Invest	Save	External debt	FDI	GDP growth	Interest rate
Invest	1					
Save	0.149	1				
External debt	-0.260	-0.160	1			
FDI	0.279	-0.610	-0.123	1		
GDP growth	0.217	0.085	-0.428	0.183	1	
Interest rate	0.243	0.088	0.0248	-0.082	-0.201	1

Source: Authors-created

The correlation test shows that pairs of explanatory variables should not cause the problem of multicollinearity because the correlation is extremely weak in almost all cases. Thus, the correlation coefficients are not at the level that can lead to multicollinearity problems.

The level of national savings largely determines total investments. Although the values of savings in Balkan countries in a longer time period are significantly lower than investments, the results of the panel model show that the variable of savings is extremely important for the movement of investments in the region, which confirms the theoretical assumption of a connection between savings and investments. In addition, the movement of savings in the model is proportional to the movement of investments (positive impact with a coefficient of about 0.10). This implies a recommendation to the governments of these countries to further stimulate saving at a national level. In addition, governments need to further liberalize all segments of financial markets, in cooperation with European partners as particularly important. Thus, through savings, investments can increase and indirectly contribute to GDP growth.

The state of external debt in the region, measured in relation to the GDP, represents another significant variable in the model, with the movement of gross investment and changes in external debt in the region being inverted. However, the coefficient of change in external debt is very small and amounts to 0.08%, which means that with an increase in external debt of 1%, there is a decrease in gross investment of 0.08%. The external debt of all analyzed countries grew continuously, and this growth was not accompanied by investments. It can even be said that investments decreased with the growth of external debt. This result can be explained from two standpoints. Firstly, in a theoretical sense, the relationship between investments, savings and external debt converges with theoretical set-

tings, which can be seen from the essential balance equation. The reason is that the continuous negative difference between investment and savings is always accompanied by a trade deficit. And secondly, the lack of investment and the growth of external debt are specific to countries in transition that can be recognized by unjustifiably high public and personal spending, as well as the neglect of investment spending.

Similar conclusions are pointed out by the FDI, whose movement is of the same direction as that of total investments, but with a very small coefficient explaining the change in gross investment. Regardless of the results of the analysis, which mainly confirm the contribution of FDI to total investments, the need for further liberalization and creation of a business environment in cross-border investment should be emphasized. Thus, Serbia is liberalizing foreign investments to the maximum, opening free zones and making joint investments. The positive effects of such a policy are high growth rates and a significant drop in unemployment.

Gross domestic product growth is in line with investments, but despite the small impact coefficient (less than 0.1%), it was not statistically significant for investment growth in this region. However, the fact that these variables are moving in the same direction indicates that more developed and dynamic economies can count on higher investments; with that being said the macroeconomic aspects of amortization are not to be neglected, because that is what spills over into investment funds in the final distribution.

Real interest rates in the countries of the region have a negative impact on gross investment, they are low in intensity and far from the limit of statistical acceptability. But, although not relevant, the negative correlation still shows that higher interest rates increase the cost of capital and negatively affect the level of investment.

**Table 3.** Results of the panel analysis with fixed effect, Investment dependent variable (2005-2020)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.303220	0.073166	17.81178	0.0000
Gross save	0.096237	0.045979	2.093073	0.0393
External debt	-0.000856	0.000364	-2.351531	0.0210
FDI	0.001239	0.002297	0.539272	0.5911
GDP growth	0.000489	0.002101	0.232632	0.8166
Interest rate	-0.000949	0.002228	-0.425934	0.6712

Source: Calculations by authors

**Table 4.** Results of the panel analysis with random effect, Investment dependent variable (2005-2020)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.167298	0.057679	20.23767	0.0000
Gross save	0.133154	0.034997	3.804683	0.0003
External debt	-0.000403	0.000235	-1.715827	0.0896
FDI	0.006761	0.001614	4.189295	0.0001
GDP growth	0.000489	0.002101	0.232632	0.8166
Interest rate	0.003559	0.001804	1.972435	0.0516

Source: Calculations by authors

**Table 5.** Results of the Hausman specification test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	25.744978	4	0.0000

Source: Calculations by authors

#### 4. CONCLUSIONS

Research on the impact of key macroeconomic variables on investments for the following selected countries in the Balkans: Croatia, Serbia, Bosnia and Herzegovina, Montenegro, North Macedonia and Albania in the period from 2005 to 2020, showed that the analyzed variables largely move within the boundaries of theoretical standpoints, and most of the pragmatic results of previous research.

The analysis starts from the basic assumption that one macroeconomic goal is inherent in all these economies: the need and desire for a high level of investment. As these are countries that show the need for higher growth rates, investments are an ideal resource for achieving such macroeconomic goals. Therefore, it is hypothesized that independent variables such as gross savings, FDI, interest rates, GDP growth and public debt affect total investment.

Panel analysis with the implemented Hausman specification test, i.e. the panel with fixed-effect, shows that savings and public debt are significant variables. Savings have a positive effect on the level of investment, while public debt has a negative impact. Although only marginally relevant, real interest rates have a negative impact on investments (higher interest rates reduce the level of investment and vice versa). One of the insignificant variables is GDP, although its direction is logical (GDP growth slightly encourages investment). Another insignificant variable that has a logical direction is FDI. A positive number may explain that total investments are only partially offset by FDI.

The results obtained are in line with the research conducted by Radulescu, Serbanescu & Sinisi (2019) which showed that the impact of domestic investment on GDP growth is weaker than the impact of private and public consumption, and that the correlation between FDI and economic growth is very weak. Another standpoint confirmed was that of Kubiszewska (2019), stating that the banking sector also affects investments, and that the amount of savings is affected by the state of the budget, or rather, debt (Rant, Mrak & Marinch, 2020). The results confirmed Madžar's view (2019) on the insufficient share of investments in the GDP in Serbia. In addition, the results align greatly with the research conducted by Cvetanović, Despotović & Milovanović (2018), Popović & Erić (2018) and Menzinger (2003), which proves that countries are forced to use FDI due to insufficient domestic savings. Overall, the results confirmed the conclusions reached by Atoyan et al. (2018) that the Balkan countries have a great need for investment. They prefer investments in infrastructure and see them as a key factor of GDP growth.

Finally, the research largely confirmed the justification of the hypothesis about the importance of investments, as well as the factors that determine them. Although previous research in this area is modest, it is notably consistent with the results of this study.

## ACKNOWLEDGEMENTS

We owe special thanks to our colleagues at the Department of Economic Theory, Analysis and Policy, and also to our colleagues at the International Economic Relations Department, Faculty of Economics University of Banja Luka.

### Conflict of interests

The authors declare there is no conflict of interest.

## REFERENCES

- Atoyan, M. R., Reinke, J. & Roaf, M. J. (2018). *Public infrastructure in the Western Balkans: opportunities and challenges*. Washington, USA: International Monetary Fund (IMF).
- Bađun, M. & Franić, J. (2015). The importance of government incentives for housing savings in Croatia. *Economic Research–Ekonomaska istraživanja*, 28(1), 331-353. doi:10.1080/1331677X.2015.1043777
- Baltagi, B. H. (2008). *Econometric Analysis of Panel Data*. West Sussex, UK: John Wiley & Sons.

- Baltagi, B. H. (2015). *The Oxford Handbook of Panel Data, 4 Edition*. New York, USA: Oxford University Press.
- Cvetanović, S., Despotović, D. & G., M. (2018). Strane direktne investicije kao izvor finansiranja ekonomskog razvoja zemalja Zapadnog Balkana. *Ekonomika*, 64(4), 17-28.
- Erić, O. (2018). *Strane investicije i ekonomski razvoj zemalja Zapadnog Balkana*. Banja Luka, Bosnia and Herzegovina: Faculty of Economics, University of Banja Luka.
- Kubiszewska, K. (2019). Banking stability during the economic transformation process in selected countries of the Western Balkans. *Economic Research – Ekonomska istraživanja*, 32(1), 2532-2553. doi:10.1080/1331677X.2019.1645714
- Madžar, L. (2019). Državni dug kao ekonomski i društveni problem – alternativna viđenja: iluzije, zablude i manipulacije. *Dug i (ne)razvoj* (pp. 10-27). Belgrade, Serbia: Institut društvenih nauka, Centar za ekonomska istraživanja. Retrieved October 28, 2021, from [http://idn.org.rs/wp-content/uploads/2020/02/Dug\\_i\\_nerazvoj\\_tekst.pdf](http://idn.org.rs/wp-content/uploads/2020/02/Dug_i_nerazvoj_tekst.pdf)
- Markovic Khaze, N. & Wang, X. (2021). Is China's rising influence in the Western Balkans a threat to European integration? *Journal of Contemporary European Studies*, 29(2), 234-250. doi:10.1080/14782804.2020.1823340
- Mencinger, J. (2003). Does foreign direct investment always enhance economic growth? *Kyklos*, 56(4), 491-508. doi:10.1046/j.0023-5962.2003.00235.x
- Mihajlović, D. (2018). Strategija priliva stranih investicija u BiH. *EkonBiz* (pp. 186-195). *Bijeljina: Univerzitet u Istočnom Sarajevu Fakultet poslovne ekonomije Bijeljina*. Retrieved 10, 25, 2021, from <http://www.ekonbiz.ues.rs.ba/ojs/issue/view/24.html?journal=ekonbiz&page=issue&op=view&path%255B%255D=24>
- Panagiotou, R. (2021). The Western Balkans between Russia and the European Union: perceptions, reality, and impact on enlargement. *Journal of Contemporary European Studies*, 29(2), 219-233. doi:10.1080/14782804.2020.1798218
- Petrović, P. (2019). Uticaj stranih direktnih investicija na kvalitet privrednog rasta srpske privrede. In S. Jelisavac-Trošić (Ed.), *Strane investicije u Srbiji – novi pogledi* (pp. 78-103). Belgrade, Serbia: Institut za međunarodnu politiku i privredu.
- Popović, G. & Erić, O. (2018). Economic development of the Western Balkans and European Union investments. *Economic research-Ekonomska istraživanja*, 31(1), 1539-1556. doi:10.1080/1331677X.2018.1498009
- Popović, G. & Erić, O. (2021). *Evropska ekonomska integracija (European economic integration)*. Banja Luka, Bosnia and Herzegovina: Faculty of Economics, University of Banja Luka
- Popović, G. Erić, O., & Stanić, S. (2020). Effects of technological changes and trade liberalisation on industrial development in the Western Balkan Countries. *Economic Research-Ekonomska Istraživanja*, 1-18. doi:10.1080/1331677X.2020.1845967
- Radulescu, M., Serbanescu, L. & Sinisi, C. (2019). Consumption vs. Investments for stimulating economic growth and employment in the CEE Countries – a panel analysis. *Economic Research – Ekonomska istraživanja*, 32(1), 2329-2353. doi:10.1080/1331677X.2019.1642789

- Rant, V., Mrak, M. & Marinč, M. (2020). The Western Balkans and the EU budget: the effects of enlargement. *Southeast European and Black Sea Studies*, 20(3), 431-453. doi:10.1080/14683857.2020.1793061
- The World Bank. (2017). *Zapadni Balkan: Bilješke o regionalnoj ekonomskoj integraciji – Dio: Politika investiranja*. 20433, Washington DC, USA: International Bank for Reconstruction and Development / The World Bank. Retrieved from <https://documents1.worldbank.org/curated/pt/466791499701754727/pdf/117236-BOSNIAN-x-WB-Regional-Economic-Integration-Issues-Notes-7-July-2017-translation.pdf>
- World Bank. (2021). *World Development indicators*. Retrieved from Data World Bank: <http://data.worldbank.org/data-catalog/world-development-indicators>

## МАКРОЕКОНОМСКЕ ДЕТЕРМИНАНТЕ ИНВЕСТИЦИЈА У ЗЕМЉАМА БАЛКАНА

- 1 Јелена Бијелић, Управа за индиректно опорезивање у Босни и Херцеговини /Докторанд Економског факултета Универзитета у Бањој Луци, Босна и Херцеговина
- 2 Огњен Ерић, Економски факултет Универзитета у Бањој Луци, Босна и Херцеговина
- 3 Славиша Ковачевић, Економски факултет Универзитета у Бањој Луци, Босна и Херцеговина

### САЖЕТАК

У овом истраживању анализира се утицај кључних макроекономских варијабли на инвестиције за шест изабраних земаља Балкана (Хрватска, Србија, Босна и Херцеговина, Црна Гора, Сјеверна Македонија и Албанија) у периоду од 2005. до 2020. године. Већина тих земаља је на путу евроинтеграција, а Хрватска је од 2013. године чланица ЕУ. Споразуми ЦЕФТА и ССП им омогућавају најбољу трговинску и економску сарадњу са Европском унијом. Развојни и макроекономски циљеви су им углавном идентични, а један од кључних је захтјев за високим нивоом инвестиција како би оствариле више стопе раста, и што брже превазишле развојни јаз (gap) у односу на земље ЕУ. Истраживање полази од хипотезе да изабрани фактори (независне варијабле): бруто штедња, ФДИ, каматна стопа, раст ГДП и спољни дуг утичу на укупне инвестиције региона. Ради доказивања хипотезе примијењена је панел анализа (модел) и имплементиран Хаусман тест који преферира панел са фиксним ефектом као релевантнији модел процјене утицаја изабраних варијабли на кретање бруто инвестиција. Резултати показују да су штедња и спољни дуг сигнификантне варијабле при чему штедња има позитиван утицај на инвестиције, док је утицај јавног дуга негативан (односно, раст штедње утиче на раст инвестиција, док раст дуга

доводи до смањења инвестиција). И реалне каматне стопе детерминишу инвестиције о чему говоре њихова гранична сигнификантност и негативан предзнак. Односно, веће камате дестимулишу инвестирање (и обрнуто). Коначно, анализа показује да је раст БДП несигнификантан, али је смјер логичан јер раст БДП незнатно подстиче инвестирање. Несигнификантна варијабла су и стране инвестиције али имају позитиван предзнак што објашњава да се дефицит домаћих само дјелимично компензира преко ФДИ.

**Кључне ријечи:** *инвестиције, бруто штедња, задуженост, БДП, ФДИ, каматна стопа, Балкан.*

