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Effects of Trade Openness on Economic Growth in the Western Balkans Countries in Time of Crises – Empirical Evidence

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Abstract: *This research aims to analyze the effects of trade openness on economic growth in Western Balkans Countries. The empirical analysis of this study consists on 22-year frame using panel data for the period from 2000-2022. Due to this period, the world faced several crises among which the biggest crises in the last 100 years: The Global Financial Crisis of 2007-2009, and the Pandemic COVID -19. The empirical model provides control variables such as the initial level of income per capita, human capital, gross capital formation, FDI, and unemployment rate. Economic growth is a dependent variable on trade openness. The estimation results indicate that the positive effects of trade openness on growth towards regional cooperation and with the EU countries are conditioned by the initial income per capita and other explanatory variables. Moreover, trade openness is more beneficial to countries with higher levels of initial income per capita, lower fiscal deficit, and higher FDI. The financial crisis indicated a significant decline in GDP per capita, along with the negative impacts on trade openness and FDI. The COVID crisis indicated a higher deficit and lower GDP and smaller trade openness.*

1. INTRODUCTION

The Western Balkans is a region that faced multiple economic challenges from 2000 to 2022. These challenges were a reflection of the internal political and economic instabilities of the region, as well as significant global and regional upheavals. The most significant crises in this period were the Global Financial Crisis of 2007-2009 and the unprecedented COVID-19 pandemic that began in 2019. Each of these crises had direct and indirect effects on the economy of the Western Balkans countries. The global financial and economic crisis (2007 – 2009 Great Recession) reduced the foreign direct investment (FDI) in the Western Balkans Countries and impacted the export-oriented sectors, that are heavily reliant on exports to the European Union. The decline in exports directly influenced production and employment, leading to broader economic downturns. After the Global financial and economic crisis in 2019, we have faced a new severe crisis – The Covid 19 that caught the world by surprise with its speed of spreading and its scale, as well as its specificities. Initially, the outbreak was identified as a public health crisis, quickly transforming into an economic and social crisis. Due to the speed of virus transmission, the first thing that was introduced was a rapid reduction to complete closure of many economic activities in most of the states globally. Unlike at the time of the 2007 global financial crisis, when the countries had much larger fiscal rooms available, today globally, this room is much smaller or does not exist at all. The trade openness suffered as well due to border closing, which has led governments to impose restrictive measures on society to limit the spread of the virus. The economic consequences in the first half of 2020 were production collapse, disruption of supply chains and the temporary closure of several industries. Many FDI projects were put on ice. Earnings

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from previous years were channeled back to the home countries. Taking into account that international trade stimulates long-term growth, and serves as a catalyst of productivity, this paper analyses the effects of trade openness on economic growth in Western Balkans Countries in the period from 2000 to 2022, emphasizing the period of these two crises. Theoretical literature and empirical studies have established a positive relationship between these two variables. In the first part of the paper, we provided the theoretical literature review. After that, in section 3 we provided a general overview of the economic growth and trade in the Western Balkans countries between 2000 and 2022, pointing out that the region's GDP demonstrated a positive trend over the past two decades, and the openness index shows a tendency of increase for the most of WB countries. Section 4 presents the empirical analysis of this study, which consists of regression analysis developed by dynamic models, Pooled Ordinary Least Squares (OLS), and the Effects regression models. In the next section, the empirical results are presented, and in the end, we discuss the findings and some policy implications and conclude.

2. THEORETICAL BACKGROUND

The relationship between trade openness and economic growth has been a central theme in economic research for decades. The Classical economist David Ricardo (1817) posited that countries benefit from specializing in the production of goods for which they have relative efficiency and trading for other goods, leading to more efficient resource allocation and higher productivity. Solow (1956) emphasizes the critical role of capital accumulation, labor, and technological progress in driving economic growth, with trade openness acting as a catalyst by facilitating access to larger markets, advanced technologies, and foreign direct investment (FDI). Increased openness to international trade is one of the most obvious aspects of globalization, and indeed one of its defining characteristics. Theoretically, there seems to be little doubt that long-run economic growth should be positively influenced by openness. Most theoretical models generate this relationship through transfers in technology and innovation which are facilitated by openness and trade. The more open the economy is, the easier it becomes to adopt technological innovations from higher-productivity trading partners, and thus the higher the growth rate (Baldwin, 2003). Given this significance, both developed and developing countries have started to focus on increasing their output. For example, output improves the level of productivity; it can meet the demand for goods and services, and this can increase with trade openness. Given this background, the emerging market economies would then become the world's principal "engine of new demand growth and spending power" in the world (Wilson & Purushothaman, 2003). Recent developments in endogenous development theory begin to provide a more convincing and rigorous theoretical basis for the positive relationship between international trade and long-term economic development (Romer, 1986; Lucas, 1988). In particular, the new theory of endogenous economic development requires that the reduction of trade barriers accelerates the pace of economic development in the long run.

Empirical studies on the impact of trade openness on economic growth have yielded diverse findings, particularly when examining different regions and periods. For developing countries, including those in the Western Balkans (WB), trade openness has generally been associated with positive growth outcomes due to the influx of technology and capital, enhanced competition, and greater market access (Edwards, 1998; Sachs & Warner, 1995). However, these benefits are often contingent upon complementary factors such as human capital, institutional quality, and sound economic policies (Rodrik, 1999; Dollar & Kraay, 2003). In the context of the Western Balkans, the transition from centrally planned to market economies since the 1990s has involved significant trade liberalization efforts. Studies specific to this region indicate mixed results, with some highlighting the positive impacts of trade openness on economic growth and others pointing to challenges such as weak institutions and inadequate infrastructure that may mitigate these benefits (Bartlett & Prica, 2011;

Estrin & Uvalic, 2014). Moreover, the COVID-19 pandemic introduced unprecedented economic disruptions globally, affecting trade flows, investment, and growth trajectories (Baldwin & Tomiura, 2020). For the WB countries, the pandemic exacerbated existing vulnerabilities, reducing trade openness and contributing to economic contractions (IMF, 2021). However, earlier theorizing was much more common and less rigorous. The new theory of endogenous development looks deeper and requires more rigorous and detailed presentations of the actual channels or ways through which lower trade barriers can stimulate long-term development. Despite the progress made by the new theory of endogenous development in theoretically deciphering the channels through which free trade leads to faster economic development in the long run, it has still been difficult to test these links explicitly in the real world, due to the lack of more detailed data. In fact, most empirical tests to date have been based on general cross-sectional data for a few groups of countries and are not much more difficult than the empirical studies done earlier (Edwards, 1993). These new empirical studies have generally shown that openness helps rapid development, but they have not been able to specifically test the specific channels through which trade is hypothesized to lead to rapid development in the long run—which is the main theoretical contribution of endogenous development theory. Trade liberalization in WB countries has been strongly promoted by the European Union (EU) in recent years, as part of its initiatives aimed at stimulating regional cooperation among the WB countries. Although regional cooperation in WB has been a declared objective of the EU since as early as 1996, due to adverse political conditions in the region very little progress has been achieved. More recently, the Stabilization and Association Process (SAP) launched in mid-1999 for the five countries - Albania, Bosnia and Herzegovina, Croatia, North Macedonia and Serbia and Montenegro, explicitly requires the implementation of regional cooperation by SEE countries in various areas. In the first decade of the new century, WB countries have been focused on undertaking measures towards reforms that lead to improvements in the trade liberalization process, WB countries have made considerable progress in their integration into the European and global economy, as well as in strengthening their mutual regional trade connection. However, these countries have been characterized by a relatively low level of trade in world markets. The WB countries have recently engaged in a regional integration process, through the establishment of free trade agreements between themselves and with the European Union (EU). The International Institutions have assisted most South East European countries (especially WBs), to enhance trade collaboration within them and to form a good basis for sustainable economic growth.[4]

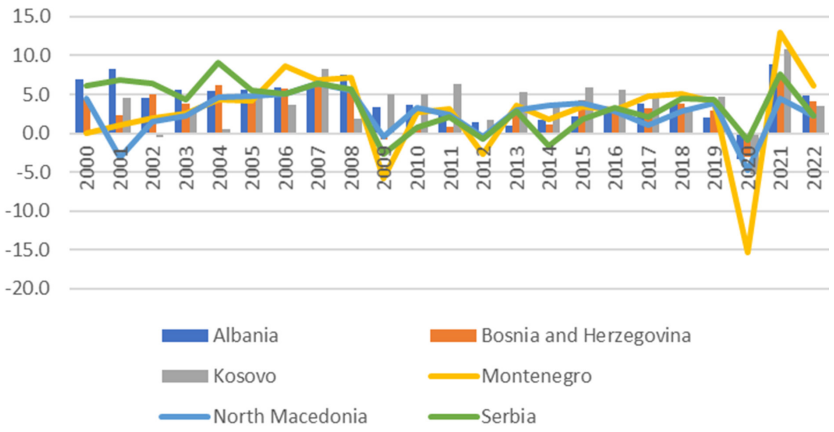
3. A GENERAL OVERVIEW OF ECONOMIC GROWTH AND TRADE IN WB COUNTRIES

Between 2000 and 2022, the Gross Domestic Product (GDP) growth in the Western Balkans underwent significant fluctuations, shaped by a mix of external and internal influences, such as global economic downturns, regional conflicts, and the efforts towards EU accession. Overall, the region's GDP demonstrated a positive trend over the past two decades. However, it faced sharp declines during the Global Financial Crisis, with reductions ranging from -1% to -5.8%, and during the COVID-19 pandemic, where GDP fell between -3% and -15%. During these periods, all Western Balkan countries experienced substantial drops in their economic output.

Observing Figure 2, the openness index, measured as a ratio of the value of trade flows (exports plus imports) with the nominal GDP, shows a tendency of increase for most of WB countries starting from the year 2000 but from 2009 shows downs in almost all countries due to effects of

[4] SEE stability pact of 2005. Part of the Stabilization and Association process is the establishment of a free trade area among SEE countries, this process aims to create a regional free trade area, which is also well integrated financially, politically and institutionally.

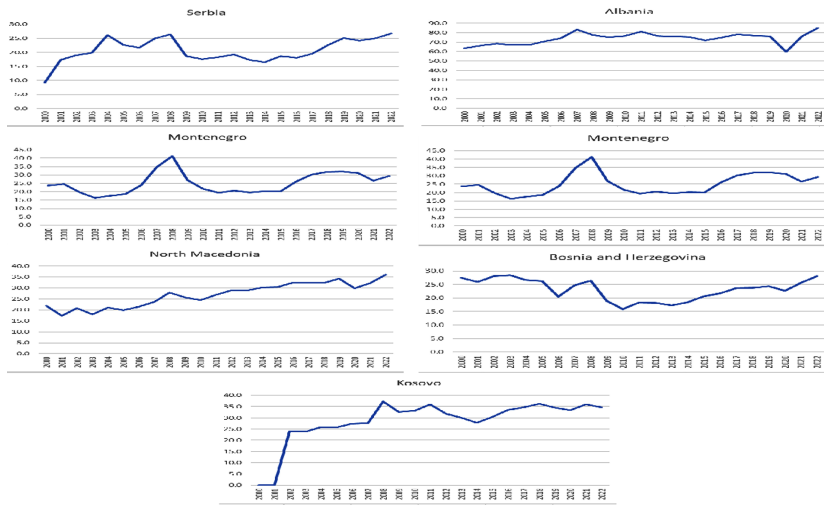
global financial crisis, but higher decrease especially in 2020 due to effect from the lockdown from COVID -19. After this year the trends started to increase moderately due to 2022. Looking at the trend of the trade openness index from 2000 to 2022, the most open countries are Montenegro, Serbia, North Macedonia, Bosnia and Herzegovina, Albania and Kosovo*. The effect of trade openness on economic growth remains a highly debatable issue since theory is ambiguous regarding the effect trade openness has on economic development (see Miller & Upadhyay, 2000, for more). Trade as a share of GDP in WB Countries increased from 21 % up to 40 % between 2000-2022.



* Kosovo – Under the UN Resolution 1244.

Figure 1. GDP in Western Balkan Countries 2000-2022

Source: IMF (2023)



* Kosovo – Under the UN Resolution 1244.

Figure 2. Trade openness in Western Balkan Countries 2000-2022

Source: World Bank (n.d.)

Foreign Direct Investment (FDI) has also an important role as a catalyst for economic development through enhancing productivity, job creation and trade growth and promotes forward and backward linkages. In light of market liberalizations, many WB countries established free trade agreements between themselves and the European Union (EU) in the late 1990s. The main destinations for inflows were Serbia and Albania, as well as Montenegro. Serbia continued to attract manufacturing subsidiaries, while Albania received mainly investments in mining and the energy sector. Figure 3 presents the FDI as % of GDP in WB Countries.

* Under the UN Resolution 1244.

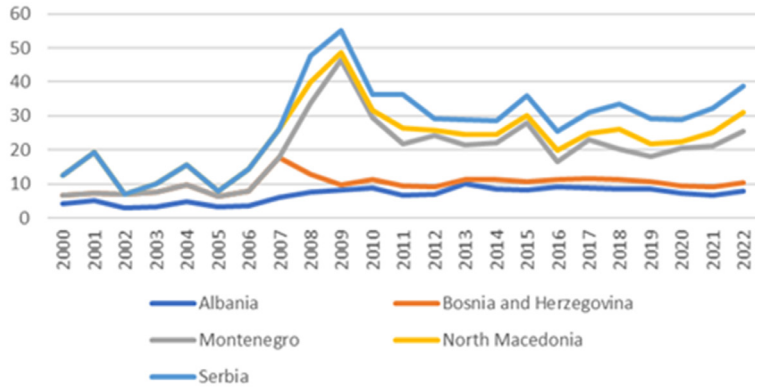


Figure 3. FDI as % of GDP in WB Countries
Source: UNCTAD (n.d.)

4. RESEARCH METHODOLOGY AND DATA

The empirical analysis of the study is conducted by using the Pooled Ordinary Least Squares (OLS) and Fixed Effects regression models, as methods that address various econometric challenges. Economic growth is a dependent variable on trade openness. The Pooled OLS model provides a general overview by treating the dataset as a single cross-sectional sample, while the Fixed effects model offers a more refined analysis by controlling for unobserved, time-invariant characteristics specific to each country. By comparing the results from these models, we aim to uncover the underlying factors driving economic growth in the region, particularly during times of crisis. The statistical significance and explanatory power of the models are assessed through metrics such as the R-squared, Adjusted R-squared, and F-statistic, providing robust evidence of the relationships between the independent variables and GDP per capita. The empirical models provide control variables such as the initial level of income per capita, human capital, gross capital formation, FDI, and unemployment rate.

The data were extracted from the International Monetary Fund and World Bank and they cover the period from 2000 to 2022 for WB Countries. The data is for GDP per capita, BDP real growth, Human Capital Index, Gross capital information, Unemployment rate FDI, and Trade openness. The model to analyze the effects of trade openness on economic growth is specified based on a growth equation introduced by Solow (1956) and Mankiw et al. (1992) and it is as follows:

$$\begin{aligned} \ln Y_{it} = {} & \beta_0 + \beta_1 \ln Y_{it-1} + \beta_2 \text{Openness}_{it} + \beta_3 \text{Openness}_{it}^2 + \beta_4 \ln \text{HumanCapital}_{it} + \\ & + \beta_5 \ln \text{InitialIncomePerCapita}_{it} + \beta_6 \ln \text{GrossCapitalFormation}_{it} + \beta_7 \ln \text{FDI}_{it} + \\ & + \beta_8 \ln \text{UnenploymentRate}_{it} + \lambda_i + \mu_t + \epsilon_{it} \end{aligned}$$

where:

- $\ln Y_{it}$ is the natural logarithm of GDP per capita for country i at time t.
- $\ln Y_{it-1}$ is the lagged natural logarithm of GDP per capita (initial income).
- Openness_{it} is the trade openness indicator.
- Openness_{it}^2 is the square of the trade openness indicator to capture non-linear effects.
- $\ln \text{HumanCapital}_{it}$ represents human capital by proxy variable Gross enrolment ratio, primary, gender parity index (GPI)).
- $\ln \text{InitialIncomePerCapita}_{it}$ is the natural logarithm of initial income per capita, that serves as a control for convergence effects, where poorer countries might grow faster than richer ones, all else being equal.

- $\ln GrossCapitalFormation_{it}$ is the natural logarithm of gross capital formation and measures the investment level in the economy, which is crucial for growth. (investment).
- $\ln FDI_{it}$ is the natural logarithm of foreign direct investment. FDI captures the impact of foreign investments on growth, which can bring in capital, technology, and know-how
- $\ln Unemployment\ Rate_{it}$ measures the percentage of the labor force that is unemployed and actively seeking employment.
- λ_i represents country-specific fixed effects.
- μ_t captures time-specific effects.
- ϵ_{it} is the error term.

5. EMPIRICAL RESULTS

In this section, we present the empirical findings from our analysis of the economic determinants of GDP per capita in the Western Balkan countries. The analysis employs both Pooled ordinary least squares (OLS) and Fixed effects regression models to examine the impact of key economic variables, including trade openness, human capital, gross fixed capital formation, unemployment rate, and foreign direct investment, on economic growth. The findings from this analysis offer important insights into the economic resilience and vulnerabilities of the Western Balkan countries, highlighting the role of trade openness and foreign direct investment in supporting growth, as well as the challenges related to human capital and labor market efficiency. These results have significant implications for policymakers aiming to foster sustainable economic growth and enhance resilience to future economic shocks.

5.1. Pooled OLS Results

The Pooled OLS regression treats the data as a single cross-sectional dataset, ignoring the panel structure. This model estimates the average effect of each independent variable on GDP per capita, treating all observations equally regardless of their country or time.

Table 1. Pooled OLS Results

Variable	Coefficient	Std. Error	t-statistic	P-value
ln_GDP_per_capita_lag1	0.8188	0.038	21.503	0.000
ln_Openness	0.1772	0.069	2.577	0.010
ln_Human_capital	-1.4538	0.735	-1.978	0.048
ln_GFCF	-0.0137	0.049	-0.279	0.780
ln_Unemployment_rate	-0.0929	0.029	-3.183	0.001
ln_FDI	0.0439	0.019	2.326	0.020

Source: Author's calculations

5.2. Fixed Effects Results

The Fixed effects regression accounts for unobserved heterogeneity by allowing each country to have its intercept, thus controlling for country-specific factors that do not vary over time. This model estimates the effect of each independent variable on GDP per capita while controlling for country-specific characteristics that are constant over time.

Both the Pooled OLS and Fixed effects models indicate a strong positive relationship between lagged GDP per capita and current GDP per capita. The coefficients are approximately 0.818,

suggesting a high degree of persistence in economic growth. The persistence in GDP per capita over time is consistent with the predictions of the Solow-Swan neoclassical growth model. In this model, the economy converges to a steady state where the growth rate of per capita income depends on the rates of population growth, technological progress, and savings. The positive and significant lagged GDP per capita coefficient reflects this convergence process, where past economic performance heavily influences current performance.

Table 2. Fixed Effects Results

Variable	Coefficient	Std. Error	t-statistic	P-value
ln_GDP_per_capita_lag1	0.8181	0.039	20.934	0.000
ln_Openness	0.1747	0.069	2.518	0.012
ln_Human_capital	-1.4257	0.736	-1.938	0.053
ln_GFCF	-0.0137	0.050	-0.275	0.783
ln_Unemployment rate	-0.0892	0.032	-2.752	0.006
ln_FDI	0.0442	0.019	2.308	0.021

Source: Author's calculations

The positive and statistically significant coefficients for trade openness (0.1772 in Pooled OLS and 0.1747 in Fixed effects) indicate that greater openness to international trade is associated with higher GDP per capita in the WB countries. According to classical trade theories, such as Ricardo's theory of comparative advantage, countries benefit from specializing in the production of goods and services in which they have relative efficiency. This specialization leads to gains from trade, which can enhance overall economic welfare and growth. The positive impact of trade openness on GDP per capita in this study is consistent with this theory. Developed by economists like Paul Krugman, the New Trade Theory emphasizes the role of economies of scale and network effects in international trade. Larger markets (through trade openness) allow firms to exploit economies of scale, leading to lower costs and increased economic growth. This theory supports that trade openness is beneficial for GDP per capita.

Surprisingly, the results show a negative and statistically significant relationship between human capital by the proxy variable Gross enrolment ratio, primary, gender parity index (GPI and GDP per capita). This finding is counterintuitive, as human capital is generally expected to have a positive effect on economic growth.

The coefficients for gross fixed capital formation (GFCF) are close to zero and not statistically significant in both models, suggesting that investment in physical capital does not have a meaningful impact on GDP per capita in this dataset. In the Solow model, capital accumulation is a key driver of growth. However, the diminishing returns to capital imply that as the capital stock increases, each additional unit of capital contributes less to output, eventually leading to a steady state where growth is driven by technological progress rather than capital accumulation. The insignificant coefficient might indicate that the WB countries are near this steady state, where further increases in capital do not significantly boost growth. Another possible explanation could be a mismatch between the rate of capital accumulation and the labor force's ability to use this capital productively. If the labor force is not adequately skilled or if there are other structural issues in the economy (e.g., poor infrastructure, weak institutions), the expected positive impact of capital formation might not materialize.

The negative and statistically significant coefficient for the unemployment rate (-0.0929 in Pooled OLS and -0.0892 in Fixed Effects) indicates that higher unemployment rates are associated with lower GDP per capita. This empirical relationship between unemployment and economic growth

is well-documented in economic literature, particularly in Okun's Law, which states that higher unemployment leads to lower output. The negative coefficient in the model aligns with this theory, suggesting that higher unemployment in the WB countries results in lower economic output and reduced GDP per capita. From a Keynesian perspective, high unemployment is a symptom of insufficient aggregate demand. When people are unemployed, they have less income to spend, leading to lower demand for goods and services, which in turn reduces GDP.

The positive and statistically significant coefficients for FDI (0.0439 in Pooled OLS and 0.0442 in Fixed Effects) indicate that higher levels of FDI are associated with higher GDP per capita. FDI is seen as a key driver of economic growth in endogenous growth models, where it contributes to the accumulation of knowledge and technology transfer. By bringing in capital, technology, and managerial expertise, FDI can lead to higher productivity and economic growth. The findings in the paper support this theory, demonstrating the positive impact of FDI on economic growth in the WB countries. While FDI is generally viewed positively in growth models, some dependency theorists argue that it can lead to economic dependency and inequality. However, the results suggest that, at least in the context of the WB countries, the benefits of FDI outweigh the potential downsides, contributing to economic growth.

The results from both the Pooled OLS and Fixed Effects models are consistent, particularly for the lagged GDP per capita, trade openness, and FDI variables. This consistency adds robustness to the findings of the paper. Both models suggest a positive and significant impact of trade openness on GDP per capita, supporting the hypothesis that greater integration into international markets boosts economic growth in the WB countries. The negative and significant coefficient for human capital is counterintuitive and suggests a need for further investigation. This could be due to issues with the proxy used for human capital. The positive and significant relationship between FDI and GDP per capita highlights the importance of foreign investment in driving economic growth in the region.

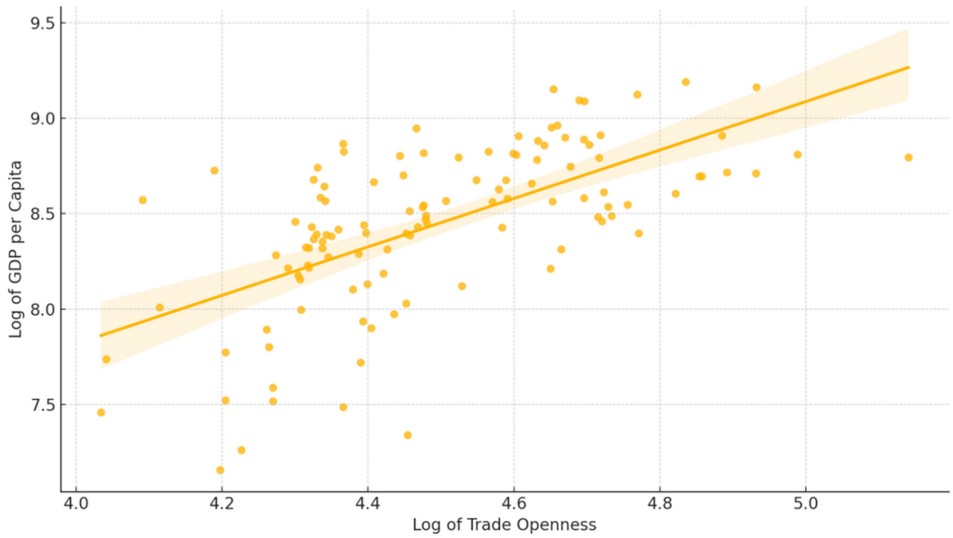


Figure 4. Relationship between trade openness and economic growth in the WB countries
Source: Author's calculations

Figure 4 presents the relationship between trade openness and economic growth in the WB countries, specifically focusing on the logarithm of trade openness and the logarithm of GDP per capita. The results suggest that higher trade openness is associated with higher GDP per capita in the WB countries. This aligns with economic theories suggesting that greater integration into the global economy can lead to economic benefits, such as access to larger markets, technology transfer, and more efficient

resource allocation. For the WB countries, which have been transitioning economies with aspirations for closer integration with the European Union (EU) and global markets, this positive relationship is particularly significant. It supports the idea that policies promoting trade openness could be a driver of economic growth in the region. The graph illustrates a key finding of our study: that trade openness is positively correlated with economic growth in WB countries. This supports the hypothesis that more open economies tend to grow faster, which is consistent with the economic literature.

6. CONCLUSION

The objective of this research was to analyze the effects of trade openness on economic growth in Western Balkans Countries, using the empirical analysis of this study consisting on 22- year frame using panel data for the period from 2000-2022. Due to this time, the world faced several crises among which the biggest crises in the last 100 years: The Global Financial Crisis of 2007-2009 and the Pandemic COVID -19. The empirical estimation results indicate that the positive effects of trade openness on growth towards regional cooperation and with the EU countries are conditioned by the initial income per capita and other explanatory variables. Moreover, trade openness is more beneficial to countries with higher levels of initial income per capita, lower fiscal deficit, and higher FDI (see tables above). The financial crisis indicated a significant decline in GDP per capita, along with the negative impacts on trade openness and FDI. The COVID crisis indicated a higher deficit and lower GDP and smaller trade openness.

This study's results are comparable and also observed positive relationships between trade openness and economic growth using a cross-country regression model. Based on the conclusions, the following recommendations are made:

- Western Balkan Countries' governments should encourage policies that increase the participation in importing and exporting of goods. This will foster trade openness which is known to positively contribute to GDP growth in WB countries.
- Policies that encourage floating exchange rates should be used. A floating exchange rate helps to improve the balance of payment and also aids in attracting foreign investments.
- Western Balkan Countries should put in place policies (not often changes in tax issues and predictable business environment) that will make their economies attractive to foreign investors.

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