

Analyzing the Impact of Final Consumption Expenditure and Gross Capital Formation on GDP Growth in the Western Balkans



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ABSTRACT: This study examines the determinants of GDP growth using a pooled Ordinary Least Squares (OLS) regression analysis. The analysis incorporates key variables such as final consumption expenditure (% of GDP), final consumption expenditure growth (annual %), gross capital formation (% of GDP), and gross capital formation growth (annual %). The findings reveal that the growth rates of final consumption expenditure and gross capital formation have significant positive impacts on GDP growth, while their static levels do not show significant effects. These results underscore the importance of dynamic economic policies aimed at stimulating consumption and investment growth. The study suggests that integrated, flexible, and holistic policy approaches are essential for achieving sustained and robust economic growth. Policymakers are encouraged to focus on enhancing consumer spending, promoting private and public investments, and fostering innovation to drive long-term economic performance.

KEYWORDS: Economic Growth, Western Balkans, Final Consumption Expenditure, Gross Capital Formation, Sustainable Development

I. INTRODUCTION

Economic growth has been a central objective for the countries of the Western Balkans over the past several decades. The dissolution of the Yugoslav federation was succeeded by a decade of military conflicts, including those in Slovenia (1991), Croatia (1991-95), Bosnia and Herzegovina (1992-95), Kosovo (1998-99), and Macedonia (2001). The region's economy suffered significant setbacks during the 1990s due to the conflicts that ravaged these countries. Additionally, the persistent political issues that have plagued the region since the 2000s have further hindered economic development. The Western Balkans, comprising Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia, face numerous internal and inter-state political challenges that impede their progress.

Despite the ongoing political instability, recent years have seen notable improvements in the institutional frameworks of these countries, as highlighted by the World Bank's reports on business environment reforms. However, the aspiration of these nations to join the European Union remains a distant goal under current conditions. The region's youthful population is increasingly disillusioned, with many seeking better opportunities abroad, leading to significant emigration. This brain drain exacerbates the challenges faced by local businesses, which struggle to find and hire qualified personnel despite high unemployment rates.

The liberalization of visa regimes, particularly for Kosovo, has facilitated greater mobility for citizens, who now frequently travel to the EU in search of improved prospects. This mobility further strains the local labor market and impacts the domestic economy.

Two critical components of economic analysis in this context are final consumption expenditure and gross capital formation. Final consumption expenditure, which encompasses household and general government spending, reflects the utilization of resources. Gross capital formation, including investments in fixed assets and inventory changes, represents the economy's capacity to expand its productive base. These factors are crucial in understanding the dynamics of economic growth in the Western Balkans.

In addition to these economic metrics, the region's integration into global trade and investment networks is essential for sustained growth. The Western Balkans have made efforts to enhance their trade relations through various regional initiatives and agreements, such as the Central European Free Trade Agreement (CEFTA). However, the full potential of these agreements remains underutilized due to bureaucratic inefficiencies, inadequate infrastructure, and a lack of competitive industries.

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The digital economy also offers significant growth opportunities for the Western Balkans. Advancements in technology and increasing internet penetration can drive innovation, create new business models, and improve public services. Governments in the region have started to recognize the importance of digital transformation, but progress is uneven, and substantial investment is required to bridge the digital divide.

Furthermore, foreign direct investment (FDI) plays a crucial role in the region's economic development. While the Western Balkans have attracted FDI in sectors such as manufacturing, energy, and real estate, political instability and weak rule of law continue to deter potential investors. Strengthening legal and regulatory frameworks to ensure a stable and predictable business environment is vital for attracting and retaining investment.

This study aims to analyse the impact of final consumption expenditure and gross capital formation on the economic growth of the Western Balkans. By examining these factors, we seek to provide a comprehensive understanding of the region's economic challenges and potential pathways for sustainable development.

2. LITERATURE REVIEW

Economic growth in the Western Balkans has been a subject of extensive academic and policy-oriented research, particularly given the region's unique historical, political, and economic challenges. This literature review synthesizes the key findings from various studies on the roles of final consumption expenditure and gross capital formation in driving economic growth, and examines additional factors such as political stability, trade integration, digital transformation, and foreign direct investment (FDI) that influence the economic dynamics of the region.

The importance of looking beyond GDP to evaluate material well-being has been emphasized by Stiglitz et al. (2009), who argue that assessing income and consumption provides a more accurate reflection of economic performance and societal progress. This perspective is relevant for the Western Balkans, where traditional GDP measures may not fully capture the nuances of economic recovery and development in post-conflict and politically unstable contexts. This aligns with the broader view in the literature that comprehensive economic analysis should incorporate various dimensions of well-being and sustainability to inform policy recommendations effectively.

Economic growth remains a key solution to numerous national challenges, as it helps to alleviate social tensions, enhance the standard of living, and expand employment opportunities.

Dabrowski and Myachenkova (2018) emphasize that the European Union and its member states should recognize the strategic significance of the Western Balkan region. Geographically, the Western Balkan countries serve as a land bridge and the most direct transit route connecting the southeastern flank of the EU with its central European core. The critical nature of this transit route was highlighted during the refugee crisis of 2015-16. Moreover, the economies of the Western Balkans are already deeply intertwined with the EU; the EU is their largest trading partner, primary source of foreign investment and other financial inflows, and the predominant destination for emigration. Previous EU enlargement experiences underscore the importance of addressing complex political, institutional, and governance issues early on to prevent disappointment on both sides. The European Commission (2018) rightly advocates for this approach in its Western Balkans strategy. Additionally, the EU itself must undergo internal institutional reforms before considering further enlargement, especially since new members, mostly small countries, would join.

Blaževski (2018) analyzed data from 2000 to 2017 using an unrestricted vector autoregressive (VAR) model to empirically investigate the dynamic relationships between government final consumption expenditure, household and non-profit institutions' final consumption expenditure, and GDP in the Republic of Croatia. The study found that final consumption, as a component of GDP, significantly influences the GDP of the Republic of Croatia, serving as an indicator of economic growth.

Mishra (2011) investigated the Indian economy using a cointegration test and estimated a vector error correction model for the period from 1950-51 to 2008-09. The study provides evidence of a long-run equilibrium relationship between private consumption and economic growth. The causality test within the error correction model shows a unidirectional causal relationship from real private consumption expenditure to economic growth in the long run. However, the Granger causality test reveals that there is no short-run causality between these variables.

Dudzevičiūtė et al. (2017) research aimed to provide more accurate estimates of the relationship between government spending and economic growth in the EU from 1995 to 2015. Their research revealed that eight EU countries exhibit a significant relationship between government spending and economic growth.

Akermi et al. (2024) investigated the impact of final consumption, domestic investment, exports, and imports on economic growth in Albania from 1996 to 2021. Using cointegration analysis, a VECM model, and the WALD test, their empirical analysis indicated no causal relationship between these factors and economic growth in both the long and short run. These findings highlight the critical economic situation in Albania, emphasizing the urgent need for economic reforms and strong strategies to stimulate growth. Bartlett and Prica (2012) observed that the economic growth of most countries in Southeast Europe (SEE) since 2000 had been largely driven by a credit boom facilitated by substantial foreign borrowing. By 2008, this resulted in current

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account deficits exceeding 10% of GDP across all the countries included in their study. They contend that while such a strategy could be a viable means of financing economic growth if the borrowed resources were judiciously allocated to investment, the reality in many cases was characterized by significant consumer-driven expenditure. The literature also notes ongoing political issues that continue to impede economic development in this region (Estrin and Uvalic, 2014), further complicating the post-conflict recovery and stabilization efforts. These persistent political challenges exacerbate economic vulnerabilities and hinder the implementation of effective development strategies.

Bakari (2017) examined the relationship between exports, imports, domestic investment, and economic growth in Japan using annual data from 1970 to 2015 through correlation and regression analyses. The correlation analysis indicated that all variables are positively correlated. The regression analysis revealed that domestic investment and exports significantly contribute to economic growth, with increases in these variables leading to increased economic growth. Findings suggest that exports and domestic investment are key drivers of economic growth in Japan. Bakari (2022) studied the relationship between domestic investment, exports, and economic growth in Greece using annual data from 1970 to 2020 and a Vector Error Correction Model. The empirical results showed no long-run causality between these variables. In the short run, only exports were found to cause domestic investment. These findings suggest that domestic investment and exports are not significant drivers of economic growth in Greece, which helps explain the country's challenging economic situation. Yedder et al. (2023) examined the relationship between domestic investment and economic growth using panel data analysis for Middle East and North Africa (MENA) countries from 1998 to 2022. Their empirical analysis confirmed that domestic investment positively affects economic growth.

Alper (2018) analyzed data from 2005 to 2016 for Brazil, Russia, India, South Africa, and Turkey using the panel data method. He found that a 1% increase in consumption expenditures boosts economic growth by 0.41%. Additionally, a 1% increase in investment expenditures raises economic growth by 0.25%. Although portfolio investments positively impact economic growth, their effect is not statistically significant.

Koyuncu and Ünal (2020) investigated the relationship between GDP and household consumption expenditures in Turkey from 1960 to 2018 using ARDL analysis. The Augmented Dickey-Fuller tests showed that both series are integrated of order one. The ARDL bounds test indicated a long-term association between GDP and household consumption expenditures, with no issues of heteroskedasticity or autocorrelation according to residual tests, and the CUSUM test confirmed the stability of long-run coefficients. Despite the long-term relationship, there was no evidence of Granger causality between GDP and household consumption expenditures, indicating that while their behaviours are related in the long run, neither series causes changes in the other. Ceessay et al. (2022) investigated the impact of general government final consumption expenditure on economic growth in the Gambia from 1977 to 2017 using the Ordinary Least Squares (OLS) method. The regression models revealed that government spending negatively correlates with economic growth. Contrary to Keynesian theory, which predicts a positive relationship, the study found a contradictory relationship between government expenditure and economic growth.

Aslan and Altinoz (2021) identified bidirectional causality between capital formation and economic growth in Europe and Asia. Ajose and Oyedokun (2018) studied Nigeria from 1980 to 2016 and found a negative but non-significant relationship between economic growth and capital formation.

Fedderson et al. (2017) employed quarterly time series data from 1975Q1 to 2012Q4 for their empirical tests. They found that while export growth directly boosts economic growth in the short run, its long-term impact is through fostering faster capital formation, which subsequently leads to significant economic growth. They concluded that an export-led growth strategy that fails to explicitly emphasize the export-capital-growth connection may not fully capture the dynamics of the export-growth relationship in South Africa.

Mehrara and Musai (2013) examined the causal relationship between gross domestic investment (INV) and GDP in Middle East and North Africa (MENA) countries using panel unit root tests and panel cointegration analysis for the period from 1970 to 2010. Their findings indicate a strong causality from economic growth to investment in these countries, while investment does not significantly impact GDP in either the short or long run. This suggests that GDP drives investment rather than the other way around, supporting the view that higher economic growth leads to increased investment.

Trpeski and Cvetanoska (2019) highlight that capital formation is a critical factor for economic growth, as recognized in both theoretical and empirical literature. They investigated the impact of fixed capital investments on productivity in Southeastern European countries from 2000 to 2017. Their findings indicate that in non-European Union countries (Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, and Serbia—and Bulgaria, which is an EU member), characterized by lower GDP per capita, low employment rates, and high unemployment, gross fixed capital formation does not significantly impact productivity. Hajamini and Falahi (2014) investigated the impact of government size (which they defined as the ratio of government consumption expenditure to GDP) on economic growth in 21 low-income and 11 low-middle-income countries from 1981 to 2007. They found that the optimal government size depends on the income level of the countries. The results show a nonlinear effect of government consumption expenditure: initially, it has an insignificantly positive impact on economic growth,

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but after surpassing a certain threshold, the effect becomes significantly negative. This explains the mixed findings of previous studies regarding the impact of government size on economic growth.

3. SCIENTIFIC RESEARCH METHODOLOGY AND ECONOMETRIC MODEL SPECIFICATION

In this section, we develop an empirical econometric model to assess the interactions and causality between economic growth, final consumption expenditure, and gross capital formation in Western Balkans countries, including Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, and Serbia. To accomplish this, we utilize pooled Ordinary Least Squares (OLS).

$$Y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \beta_4 x_{4i} + u_i$$

y_i : GDP Growth (annual %)

x_1 : Final consumption expenditure (% of GDP)

x_2 : Final consumption expenditure (annual % growth)

x_3 : Gross capital formation (% of GDP)

x_4 : Gross capital formation (annual % growth)

Variable Name	Definition	Source
GDP growth (annual %)	Annual percentage growth rate of GDP at market prices based on constant local currency.	World Bank national accounts data, and OECD National Accounts data files.
Final consumption expenditure (% of GDP)	Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (private consumption) and general government final consumption expenditure (general government consumption).	World Bank national accounts data, and OECD National Accounts data files.
Final consumption expenditure (annual % growth)	Average annual growth of final consumption expenditure based on constant local currency.	World Bank national accounts data, and OECD National Accounts data files.
Gross capital formation (% of GDP)	Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.	World Bank national accounts data, and OECD National Accounts data files.
Gross capital formation (annual % growth)	Annual growth rate of gross capital formation based on constant local currency.	World Bank national accounts data, and OECD National Accounts data files.

4. EMPIRICAL EVIDENCE

In this section, we present the outcomes derived from the pooled Ordinary Least Squares (OLS) regression analysis. This method pools cross-sectional and time-series data to estimate the relationships between the dependent and independent variables. Our primary focus is to understand the determinants of GDP growth by examining the influence of final consumption expenditure, gross capital formation, and their respective growth rate.

GDP growth (annual %)	Coef.	Std. Err.	t	P> t
Final consumption expenditure (% of GDP)	-0.026	0.037	-0.690	0.493
Final consumption expenditure (annual % growth)	0.818	0.111	7.370	0.000
Gross capital formation (% of GDP)	-0.073	0.056	-1.310	0.194
Gross capital formation (annual % growth)	0.056	0.027	2.090	0.039

R-squared: 0.5698, suggesting that approximately 57% of the variance in GDP growth is explained by the independent variables in the model. Adjusted R-squared: 0.5491, which adjusts for the number of predictors in the model and still indicates a good fit.

The variable representing the growth rate of final consumption expenditure shows a strong and positive impact on GDP growth, as evidenced by its highly significant coefficient. This indicates that an increase in the growth rate of consumption expenditure substantially boosts economic growth. Policies aimed at increasing disposable income through tax cuts or direct

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transfers can enhance consumer spending. Measures such as reducing income taxes, providing subsidies, or increasing social welfare payments can directly boost household consumption. Enhancing consumer confidence through stable economic policies and transparent communication can also increase spending. Policies that ensure job security, control inflation, and stabilize political situation contribute to a positive economic outlook, encouraging households to spend more. Furthermore, easing access to credit, consumers can finance larger purchases and smooth consumption over time. Regulatory measures to lower interest rates and reduce borrowing costs can make credit more accessible, fostering increased spending.

The growth rate of gross capital formation also exhibits a positive and statistically significant impact on GDP growth. This suggests that investment in physical capital, such as infrastructure, machinery, and buildings, plays a crucial role in driving economic expansion. Policies that create a conducive environment for private investment are vital. This can include tax incentives for businesses, easing regulatory burdens, and ensuring political and economic stability to attract domestic and foreign investors. Government investment in infrastructure can have a multiplier effect on the economy by not only providing immediate jobs and income but also by improving the efficiency and productivity of the private sector. Projects in transportation, energy, and telecommunications can be particularly impactful. The analysis reveals that the levels of final consumption expenditure and gross capital formation as percentages of GDP do not have significant direct impacts on GDP growth. This might suggest that the dynamics, rather than the static levels, of these expenditures are more critical in influencing economic performance. Given that the growth rates of consumption and capital formation are more influential, policies should prioritize accelerating these rates. This involves continuous assessment and adaptation of economic policies to sustain momentum in both consumption and investment growth.

5. CONCLUSIONS

This research aimed to identify the determinants of GDP growth using a pooled Ordinary Least Squares (OLS) regression analysis. Our analysis incorporated key variables such as final consumption expenditure (% of GDP), final consumption expenditure growth (annual %), gross capital formation (% of GDP), and gross capital formation growth (annual %). The findings provide valuable insights into the factors that drive economic growth and inform policy recommendations.

The growth rate of final consumption expenditure has a strong and positive impact on GDP growth. This underscores the importance of policies that stimulate consumer spending. Strategies such as increasing disposable income through tax cuts, enhancing consumer confidence, and facilitating access to credit can significantly enhance economic performance.

The growth rate of gross capital formation also positively and significantly affects GDP growth. This highlights the critical role of investment in physical capital. Policies encouraging private investment, public investment in infrastructure, and support for innovation and technology are crucial for stimulating economic growth.

The levels of final consumption expenditure and gross capital formation as percentages of GDP do not show significant direct impacts on GDP growth. This suggests that it is the growth rates, rather than the static levels, of these expenditures that are more crucial in driving economic performance.

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