



## Research Article

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# Impact of External Debt on Economic Growth in Western Balkan Countries

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## Abstract

*This paper investigates the average impact of government debt on long-term GDP growth in four Western Balkan countries of Albania, Serbia, Macedonia, and Bosnia & Herzegovina over a 23-year period from 1997-2019. It examines the use of financing through debt on short- and long-term economic growth for these economies using a dynamic common correlated effects model with heterogeneous coefficients. The model's methodology estimation mimics Chudik and Pesaran and the pooled mean group estimator is used. The conclusion of this study, with respect to the average impact of government debt on long-term GDP growth in the four Western Balkan countries, is consistent with the literature in that in the long-term external debt does not contribute to long-term growth and, in fact, tends to have a negative impact. The COVID-19 pandemic has exacerbated the long-term growth outlook for the four Western Balkan countries.*

**Keywords:** Public debt, economic growth, fiscal policy, dynamic common correlated effects model

## 1. Introduction

By all accounts, external debt is a key factor in economic development and growth. This is particularly true in the long term. The COVID-19 pandemic has exacerbated the issues of expansive economic policies and have triggered a radical increase in debt, particularly for Emerging Market and Developing Economies (EMDEs). Despite the economic expansion, all the Western Balkan economies have plunged into a deep recession (much like the rest of the EMDEs). Overall, economic activity

contracted as much as 3.4 percent in the Eastern Balkan region. Much of this was due to a sharp drop in foreign and domestic demand and supply chain disruptions. Towards Q3 of 2020, there was a partial recovery, albeit different from country to county, due to the easing of global and local lockdowns and increasing global demand. This economic revival was, however, was short-lived as COVID infections surged globally toward the end of 2020. The pandemic stalled a decade of income growth and poverty reduction progress in the Western Balkan region. Towards the end of 2020, many of these counties had significant job losses (approximately 50%). As in all EMDEs, the less educated workers, women, youth and “informal” workers bore the lion’s share of the negative labor market impact. The World Bank is estimating a regional recovery of 4.4 percent in 2021 and approximately 3.7 percent in 2022 and 2023. See Figure 1 and 2 for growth rates of the Western Balkans from 2018 to projected rates in 2022. However, these growth projections all hinge upon COVID vaccination rates and correct policy choices. The data needs to note that some countries not only had COVID-19 pandemic crisis but also other issues in the recent past that affected economic growth rates. For example, Albania had a major earthquake in November 2019.

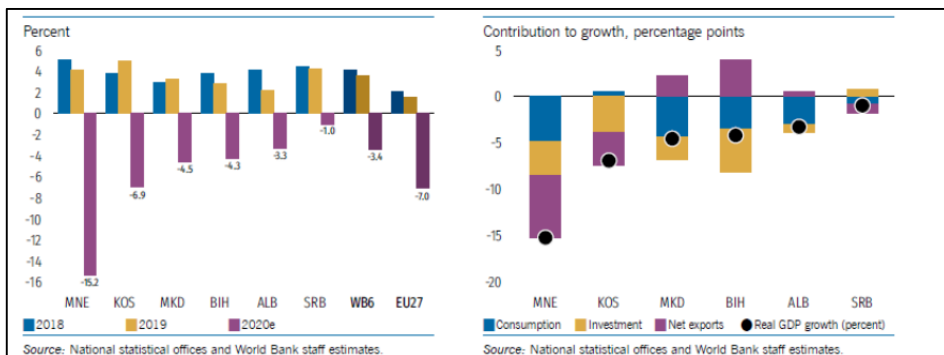


Figure 1: COVID-19 pandemic recessions in Western Balkans. (Aggregate demand)

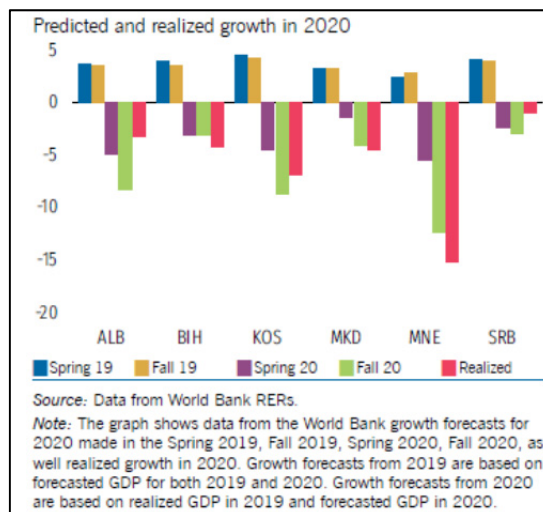
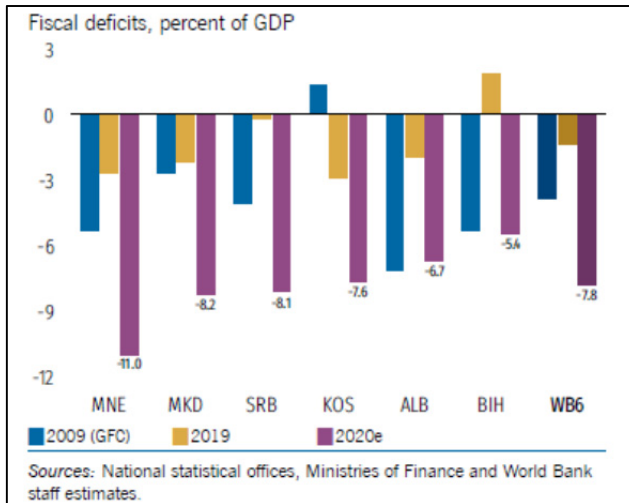


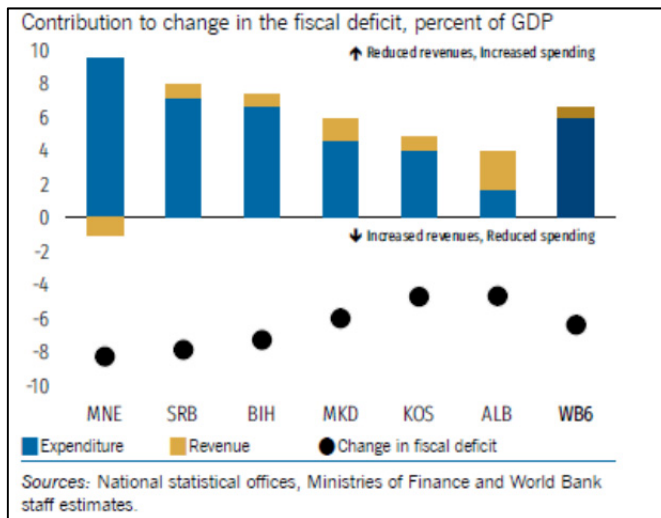
Figure 2: COVID-19 pandemic and growth expectations

Source 1&2: “Western Balkans Regular Economic Report: Spring 2021”, World Bank Report #19. April 1, 2021.

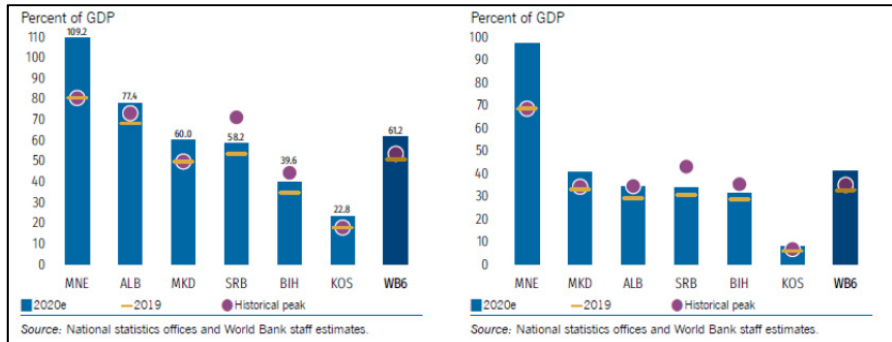
Figure 3 shows the Fiscal deficit levels comparisons during the Great Financial Crisis of 2009 (GFC), normal times in 2019, and the current COVID-19 Pandemic Crisis 2020. While Figure 4a displays the high public spending during the current 2020 COVID-19 Pandemic crisis and the accompanying drop in tax revenue; and Figure 4b shows that public and publicly guaranteed (PPG) debt increased to new heights due to the COVID-19 pandemic was largely originating from external borrowing rather than “free funding”. (“Free Funding” is a government’s financing options, such as, income taxes from import or export of goods, individual’s income taxes, corporations, etc., which is not derived from a third party where an added interest is involved.)



**Figure 3:** Great Financial Crisis (2009) (GFC) vs. normal (no crisis, 2019) vs. COVID-19 Crisis (2020)  
**Source:** “Western Balkans Regular Economic Report: Spring 2021”, World Bank Report #19. April 1, 2021.



**Figure 4a:** Public spending (2020 COVID-19 Pandemic crisis) and tax revenue  
**Source:** “Western Balkans Regular Economic Report: Spring 2021”, World Bank Report #19. April 1, 2021.



**Figure 4b:** Public & Publicly Guaranteed (PPG) Debt during COVID-19 (primarily external borrowing)  
**Source:** “Western Balkans Regular Economic Report: Spring 2021”, World Bank Report #19, April 1, 2021.

## 2. Literature Review

All EMDEs, with perhaps the exception of China more recently, need to carry a degree of external debt in order to obtain their growth rate targets. In the aftermath of the GFC of 2009, and now due to COVID -19, there is a fusion of crises between major global biological evens and global financial and economic crisis that has led to escalatory expansionary fiscal policies in order to deal with the double crisis and resulted in record levels of EMDEs external debt. We anticipate this interconnectedness to continue. All EMDEs governments need to borrow funds to finance public expenses if they are to promote growth and enhance welfare (increased income and lower poverty rates). It should be noted that part of financing public expenditure is also derived from a specific “Free Funding” tool which refers to the term of the government’s financing options, such as, income taxes from import or export of goods, individual and corporate income taxes, etc.); and not from a third party where an added interest is involved. The issue of the impact of debt (and of debt reduction) on growth is an ever-increasing on-going policy dilemma for IMDs.

While there are studies that show a positive, correlation between external debt and economic growth and prosperity for a wide variety of reasons, the consensus in developmental economics is that there is a long-term negative correlation but it has multifaceted reasons.

The seminal understanding of the relationship between external debt and economic growth in the literature stems from the Dornbush–Krugman proposition that external dept leads to an economic slowdown. One of the largest studies conducted on this topic was by the International Monetary Fund IMF (Pattillo, Poirson, and Ricci, 2002) which also concluded that the relationship of external debt to growth “...the average impact of debt on per capita growth appears to become negative for debt levels above 160-170 percent of exports and 35-40 percent of GDP.” The study found that investments were “...not the main channel through which excessive external indebtedness reduces growth.”

The direct and indirect negative effects of external debt on economic growth, spreads through a variety of channels and has policy and real economy implications – especially in the long-term. The relation, however, between external debt and economic growth varies from country to country and while it may be a positive or negative in the short-term, invariable for many EMDEs it is negative in the long-term.

Studying the correlation of external debt to growth is not simple, as it is multifaceted and has indirect and direct channels of impact. Moreover, there are innumerable varieties of methodologies (different variables and models) drawing conclusions on issues ranging from income level, to GDP growth, to foreign currency reserves, etc. See examples of this range as follows:

- Christopher and Alexandra (2003) who show that debt payments negatively affect the income of highly indebted countries as they find it hard to debt repayments;
- Ciftcioglu and Begovic, (2008), a Central Eastern European study which shows negative

correlations between external debt and economic growth due to both the level of inflation rate and its volatility;

- Hansen (2001), which concluded that the debt problem (in terms of negative impact on growth) seems to be more severe in highly aid-dependent countries;
- Fischer, 2000, (Mora, Sahay, Zettelmeyer, & Garibaldi, 2002) suggests that main crucial element of economic growth for economies in transition period are structural reforms, stability of macroeconomic aspect and a reduced role of the government;
- Aristovnik, 2008, shows evidence that external debt can lead to exchange rate appreciation affecting account deficits and thereby changing the structure of the GDP in terms of non-traded goods with an associated risk of productivity boost. While still other studies;
- Siddique & Selvanathan, 2016 concluded that the negative growth impact of external debt has a tendency to be higher in indebted countries especially when facing the global opposed shocks in export prices.

EMDEs tend to struggle with the effective allocation of external funds due to inefficient policies, corruption, insufficient tax systems, lack of robust government institutions, and accountability and reporting measures, to name a few. These and other issues lead to a general tendency of high external debt in EMDEs having a long-term negative impact on economic growth and prosperity. It should be noted that this relationship is not solely in the realm of EMDEs but in certain advance countries as well. A recently a study from Semmler and Tahri (2017) evaluated the external debt sustainability in the context of current account, investment and consumption for countries such as Italy, Spain and Germany. The investigated the ratio of external debt to assets concluding a stable movement of Germany while Italy and Spain represent a slow-movement through the European debt crises of 2010.

### 2.1 Exchange rate and external debt relation

Financial crisis main driver of exchange rate variation is the amount of external debt in a country, although, it should be noted that, not all the debt is impacted in the same way by rate fluctuations. Marshall-Lerner (2013) condition shows that the depreciation in exchange rate feeds economic growth by increasing net exports (Real depreciation makes domestic goods and services relatively cheaper related to foreign goods and services which causes increase of foreign demand and therefore increase of domestic export). On the other hand, this depreciation increases the liabilities in the foreign currency. According to economic theory, the increase in exchange rate raises the private sector's income i.e. increased consumption. The exchange rate depreciation leads to the increase of external debt nominated in local currency (Rodseth, 2000) others have found that external debt has a significant effect on exchange rate and that it is a positive correlation. Findings from Stein and Lim (1995) show that an increase in consumption would lead to a fall in savings and increase of interest rates, meaning more capital for the country and increased real exchange rates deteriorating the current balance of the country, which in the long run leads to increased external debt.

### 2.2 External Debt and Economic Growth

Most of theoretical and empirical studies show a negative relationship between these two variables. The model of Harrod-Domar shows a direct relationship between savings and economic growth where external financing was seen as capital to help the financing gap thereby promoting growth. Based on literature there are five channels through which external debt can have a negative impact on economic growth. First, the debt overhang hypothesis where is expected increase on tax rate return while reduced investment to avoid future taxes (Krugman,1988). Second, the crowding-effect of external debt when debt service reduces consumption and spending, reducing public investment. Third, the effect of growth of high debt through payment balance account referred to as the liquidity constraint hypothesis. High debt requires inflow of foreign exchange to service debt, low exports make that problematic, and in these situations inputs and capital goods become expensive. This can lead to

low economic growth. Fourth, debt overhang, crowding out effect and liquidity constraint hypothesis show an indirect negative relation of external debt on economic growth. Fifth, when the Debt Laffer Curve is used, it shows a nonlinear relationship between growth and debt assuming that there is an optimal level of debt promoting growth (Cohen, 1993). Depending on the analysis, the debt-growth relationship tends to show mixed outcomes, can differ in the short- to long-term, has many exogenous exceptions.

### 3. Historical Debt Perspective

This paper focuses on the debt picture (prior to the COVID-19 pandemic) of four specific Western Balkan economies of Albania, Serbia, Macedonia, and Bosnia & Herzegovina. Prior to the COVID-19 pandemic, these four countries experienced a debt surge in 2010 due to the GFC of 2009; however, it is important to note that their debt has been increasing for the past decade.

**Albania:** By 1997, a general crisis in the country affected almost all economic financial indices. Inflation and hyperinflation indicated the overall state of the economy reflected also in the exchange rate toward international and local currencies (decrease by 40%). The confidence of regional currency accompanied with the collapse of the public order unable to cover unrehearsed situations. The only financing source operating for the budget deficit was Bank of Albania's credit. The informal market was pervasive and there was much concern that the primary legitimate economic market was in jeopardy. In 1998, there was a slight bump in economic growth of 8% compared to the crisis year of 1997 and an improvement in inflation rate from 42% to 8.7%. During 2000-2008, in average terms, annual economic growth was 6% (highest was up to 7.5% in 2008 and the lowest was 3.4% in 2009). By 2011, global deceleration of growth affected Albania macroeconomic picture and growth decrease to 5.3%. In 2012 and 2013, the economic growth remained positive, and the budget deficit accounted for 3.4% of GDP while public debt 61% during the same period. In 2014, Albania faced incomplete capacity to handle the economic growth in an environment with many tensions in the geopolitical sphere. However, in 2015, macroeconomic conditions began to improve and there was a general degrade in financial health followed with a public debt level up to 72% of GDP. More stable economic growth and public debt indicators were noticed during 2016. In 2017 debt statistics show that it stands at 71.5% while GDP growth is 3.82%, in contrast with GDP growth of 4.1% in 2018, while debt reaching the level of 61.5%. 2019 signs a decrease in those values of 60.5% of debt and 2.2% of GDP growth. According to the IMF the lowest value of economic growth was -10.9% in 1997 and highest 12.9% in 1999, while highest value of debt ratio was 84.6% of GDP in 1997 and lowest 53.5% of GDP in 2007. See Figure 5 for Albania's External Debt Ratio to GDP and Economic Growth.

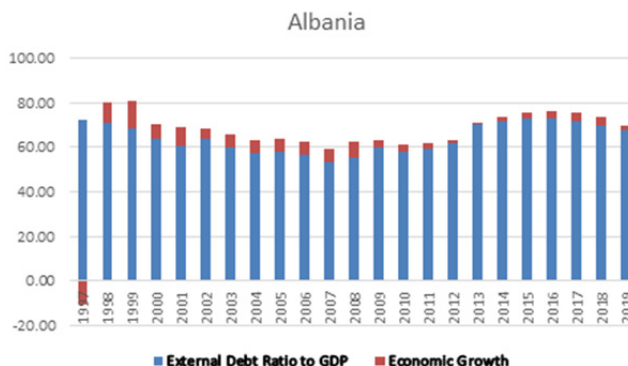
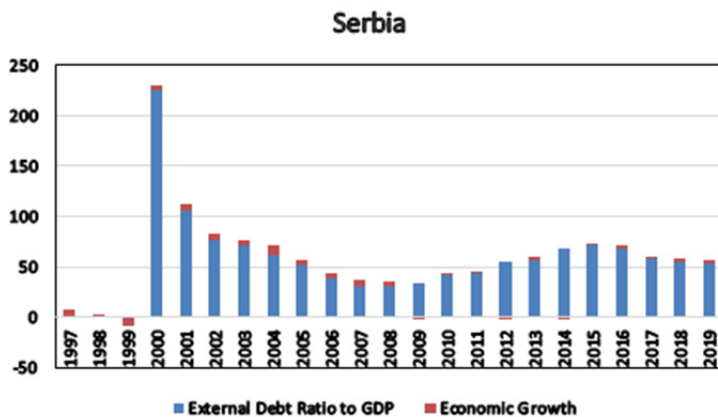


Figure 5: Albania's External Debt Ratio to GDP and Economic Growth

Source: Author, <https://countryeconomy.com/>

**Serbia:** Economy of Serbia's Republic have been facing several years of instability and war causing detrimental economy. In 1997 GDP level was 10.1%, while Kosovo war indicated the slowdown of 1.9% in 1998 and a fall in 1999 -15.7%. After 2000 Serbia improved the economic reforms restoring the macroeconomic stability before crises GDP levels were good enough reaching 5% in 2000, 5.5% in 2001, then following by a decrease until 2004 which reached the peak of 8.4% from 2005-2007 it had its ups and downs altogether with public external debt. Public external debt went in decline from 76.6% in 2001- 16.9% in 2008. Foreign borrowings were not the main problem of external debt, in Serbia's case investment as a % of GDP was in low levels for an economy in transition. Low investment (% of GDP) led to inflow of remittances, creating hedged positions of foreign currency. All over this period inflation levels declined as well and on average it remained the highest from 2004-2008. External debt to GDP ratio during 2010-2012 was stable, but still one of the highest in the region, which mainly came as dynamics of current and capital account. More than 90% of Serbian public debt was counted in foreign currency. Nominal depreciation of Dinar to debt-counted currencies administered in debt increase. From 2015 -2019 external debt declined while GDP growth went higher in 2018 (4.4%). See Figure 6 for Serbia's External Debt Ratio to GDP and Economic Growth.



**Figure 6:** Serbias's External Debt Ratio to GDP and Economic Growth  
**Source:** Author, <https://countryeconomy.com/>

**North Macedonia:** In Macedonia like in other Balkan states the period of global crises created an extensive increase of public debt to Macedonia. Having a weak tax revenue system as consequence borrowing becomes a practice to governmental projects releases and economy stabilization. From 1996-2002 the real GDP growth (in %) was on average 1.9. The annual growth of 4.5% surpassed the industrial output growth by 2.9% in 1997. Average inflation rate annually was 0.8% in 1998, being so the lowest rate since Macedonia independence declaration, even though by the end of 1998 deflation reached 1% (Macedonian Denar devaluation). From 1997-2000 GDP structure reaches a slight balance in the economy compared to pre-transition time. In 2000 Macedonia reached the highest growth of that time of 5.1%, total fiscal revenues increased from 2000-2001 from 4.9% -6.2%. By the beginning of 2002 the state budget was dominated by current spending while capital spending was kept restricted. The slow growth of Macedonia also is reflected in years of 2003-2009 with an average real GDP growth of 4% with a decline in the upcoming years from 2010-2016 on average of 2%, while during 1997-2002 the budget deficit in -1.6% of GDP in average, rising a bit by 2003-2009 on average of -0.6 and going deeper by 2010-2016 with -3.3 % of GDP on average. The highest rate of GDP growth was noticed in 2007 of 6.1%. From 2010 ongoing public debt has been raising while lowest peak was noticed in 2008 as 20.5% of GDP. See Figure 7 for North Macedonia's External Debt Ratio to GDP and Economic Growth.

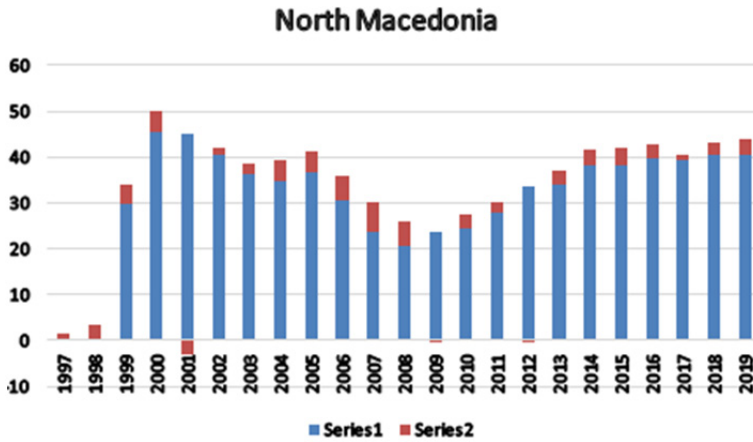


Figure 7: North Macedonia’s External Debt Ratio to GDP and Economic Growth  
Source: Author, <https://countryeconomy.com/>

**Bosnia & Herzegovina:** Bosnia and Herzegovina GDP growth from 1997-2013 mainly followed a downward trajectory with a low in 2009 at 3% due to GFC. The highest GDP growth was experienced in 1997 at 34.4%. External debt, unstable deficits, inefficiency tax policies and budgetary overruns sent the country into very large debt levels. The highest level of disbursement of external debt was realized in 2007 and 2008. The main reasons for this is because Bosnia and Herzegovina has never truly recovered from the post-Soviet restructuring of Yugoslavia. The Bosnia and Herzegovina economy is also largely based on consumption rather than production with the export sector only contributing 30% towards GDP - the lowest in Europe. This has created a long-standing higher external debt level for the country. See Figure 8 for Bosnia & Herzegovina’s External Debt Ratio to GDP and Economic Growth.

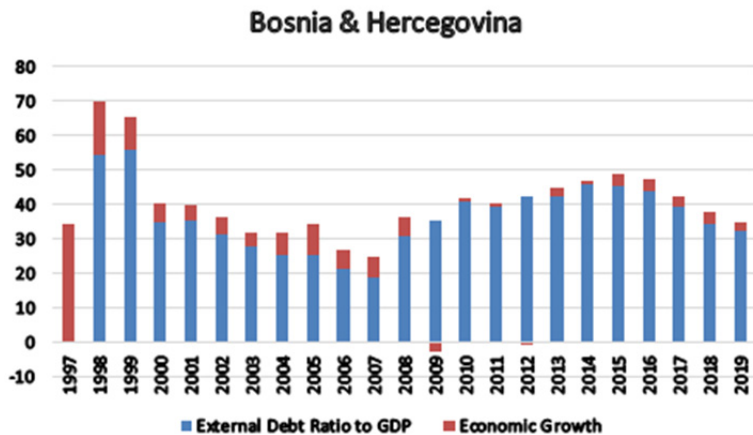
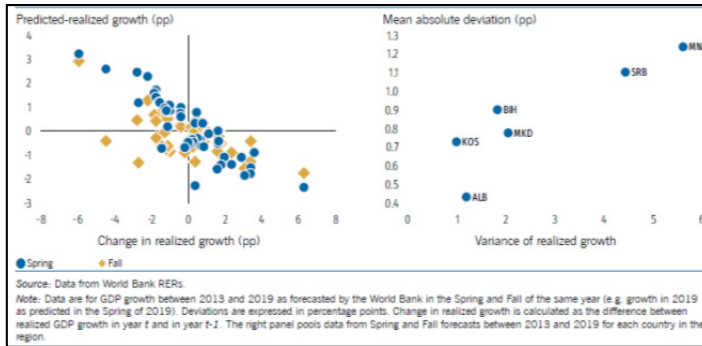


Figure 8: Bosnia & Herzegovina’s External Debt Ratio to GDP and Economic Growth  
Source: Author, <https://countryeconomy.com/>

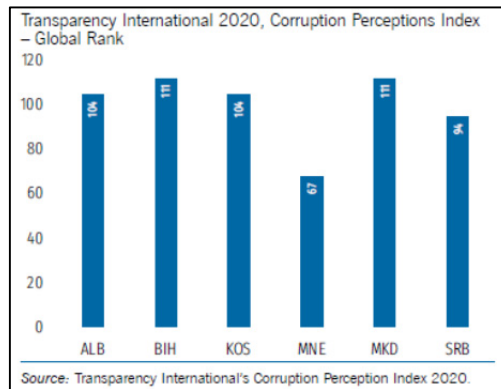


3.1 Debt Challenges

Historically, all four countries have been challenged over the effectiveness and transparency of their decade long debt increases. Much has been attributed to their weak political systems, volatile economies, access to “easy” financing, and corruption. See Figure 9 and 10.



**Figure 9:** Growth is difficult to predict when the economy is more volatile  
**Source:** “Western Balkans Regular Economic Report: Spring 2021”, World Bank Report #19. April 1, 2021.



**Figure 10:** Corruption Perceptions Index (CPI of 180 countries) Western Balkan  
**Source:** “Western Balkans Regular Economic Report: Spring 2021”, World Bank Report #19. April 1, 2021.

4. Analysis of External Debt to Economic Growth in Western Balkan Countries (1997-2019)

**Table 1:** Average Indicators 1997-2019 (World Bank, 2019)

	Average Indicators 1997-2019				Inflation annual % change
	The amount of external debt state (million USD)	GDP, (billion USD)	Exchange rate 1US dollar = ALL	External gov. debt to GDP, (ratio in %)	
Albania	4,528,715,629	9,306	114.0475	64.19	4.453043
Serbia	23,683,630,366	34,394	85.7855	61.53571	17.43652
Northern Macedonia	4,403,498,910	8,096	51.60696	35.905	1.866957
Bosnia-Herzegovina	10,304,775,466	13,367	1.51	29.23095	1.801261

As shown on the table above the average indicators from 1997-2019 show that Serbia heads with the higher amount of external debt with USD\$23,683 million followed by Bosnia & Herzegovina, Albania and Northern Macedonia with USD\$4,403,498,910 billion. The highest GDP on average from 1997-2019 was seen to be present in Serbia again with USD\$34,394 billion followed by Bosnia & Herzegovina Albania and Northern Macedonia. On the other hand, the strongest currency seemed to be Albanian lek, as seen from the average indicator table. While Albania represents the highest external government debt to GDP (ratio in %) followed by Serbia, Northern Macedonia and Bosnia-Herzegovina. On average Serbia seems to have had the highest inflation rate (annual change in %) through years 1997-2019 followed by Albania, Northern Macedonia and Bosnia Herzegovina.

Below are shown some graphical representation of the main macroeconomic parameters of these Western Balkan countries. Figure 11 shows the Nominal GDP value from 1997 to 2020. Except for Serbia the economies of the other countries have a steady growth during the past 22 years. See Figure 12 for the external debt in current billions of US\$ (2020).

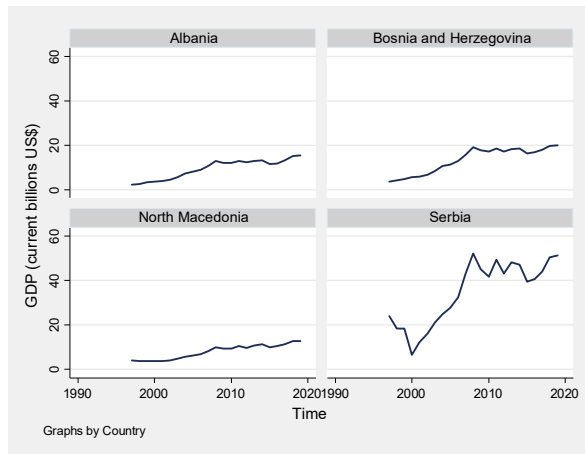


Figure 11: GDP in current billions of US\$. Source World Bank (2020)

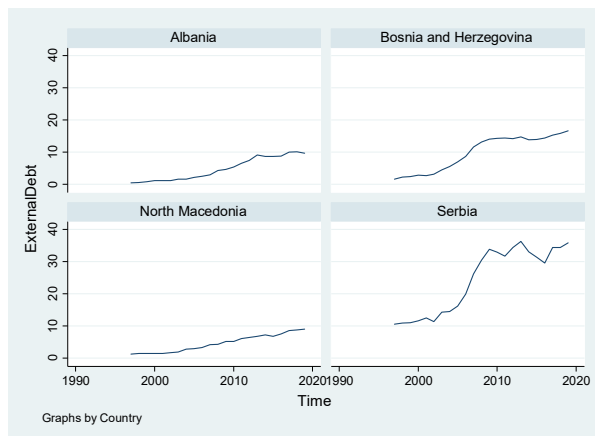


Figure 12: External Debt in current billions of US\$. Source World Bank (2020)

### 5. Methodology and Data Analysis

The econometric model relies on Chudik and Pesaran (2015) dynamic common correlated effects model with heterogeneous coefficients. In the past years several important contributions were applying the DCCE model with heterogeneous coefficients (Ditzen, 2018). The main logic behind the econometric dynamic models is the propagation effect through time of the independent variables on the dependent one. The conceptual frame based upon the interaction among GDP and Public Debt is treated thoroughly in the literature (Guex, 2018). Nominal GDP and Debt are typically characterized by exponential growth, with high correlation coefficient if analyzed directly. The inclusion of lagged variables in the model allows to evidence the short run and long run effects over the GDP. Meanwhile the use of panel data guarantees a sufficient number of lags across countries allowing to evidence the effects even with a limited time series sample. All the countries under consideration suffered a gap in statistical reporting during the 90s, due to political and economic instability. As a result, the time period consists of only 22 years over a panel of 4 countries.

The estimator is based in the GLS estimation, where the model is specified as a system of equations. The heterogeneous coefficients are randomly distributed around a common mean  $\beta_i = \beta + v_i$ , such as  $v_i \sim \text{IID}(0, \Omega)$  (Pesaran and Smith, 1995). The heterogeneity issue can be fixed by transforming the original function:  $\ln \text{GDPI}_{i,t} = \beta_0 + \beta_1 \ln \text{Debt}_{i,t} + \beta_2 \ln \text{Exrate}_{i,t} + \epsilon_i t$  (1), where:

$\ln \text{GDPI}_{i,t}$  is the natural logarithm of GDP (current billions US\$)

$\ln \text{Debt}_{i,t}$  is the natural logarithm of External debt stocks, total (current US\$)

$\ln \text{Exrate}_{i,t}$  is the natural logarithm of the Official exchange rate (Local Currency Unit per US\$, period average)

The assumption of the pooled mean group estimator (PMG) is, that regressors have a homogeneous long run and a heterogeneous short run effect on the dependent variable. Equation 1 is transformed into an error correction model, such that:  $\Delta y_{i,t} = \phi_i(y_{i,t-1} - \theta_i x_{i,t}) + \beta_{0,1} + \beta_1 \Delta x_{1,t} + \beta_2 \Delta x_{2,t} + \epsilon(t,i)$  (2).

$\phi_i$  is the error-correction speed of adjustment parameter

$\beta$  are the long run coefficients and assumed to be homogeneous,

$\theta_i$  are the short term dynamics and are heterogeneous across units.

This model is assuming that without the group effects, there is a simple instrumental variable estimator available, using the lagged difference,  $y_{i,t-1} - \theta_i x_{i,t}$ , as instrumental variable. In this way the unobserved effect is eliminated and the error term reported from the dynamic panel data regression on the first-difference variables is asymptotically consistent.

Shin et al. (1999) estimate the long run  $\beta$  by MLE and the short run  $\theta$  by OLS.

The results of the estimation are shown in Table 2 using the `xtcce2` command developed by Jan Ditzen (Ditzen, 2018) in STATA14.

**Table 2:** Dynamic Common Correlated Effects Estimator - Pooled Mean Group

D.Ingdp	Coef.	Std. Err.	z	P> z
<b>Short Run Est.</b>				
Mean Group:				
D. ln debt	.5608542	.3406999	1.65	0.100
D. ln exrate	-.8319406	.0630603	-13.19	0.000
<b>Long Run Est.</b>				
Pooled:				
L.lngdp	-.3067453	.3526489	-0.87	0.384
ln debt	.0596499	.0788892	0.76	0.450
ln exrate	-.1066388	.5344789	-0.20	0.842

Number of groups = 4    Number of observations = 88; Pooled Variables: L.lngdp L1\_ln debt ln exrate; Mean Group Variables: D.L1\_ln debt D.ln exrate; Long Run Variables: L.lngdp L1\_ln debt ln exrate; Co-integration variable(s): L.lngdp; Heterogeneous constant partialled out;

The results of Dynamic Panel Data Regression indicate that in the short term 1% increase in the differential of the External Debt can increase the GDP by 0.56% (a slightly positive significant effect), meanwhile as expected the effect on the GDP in the long run will not be significant, P-value=0.45 for *lndebt*. The same is valid also for the exchange rate, in the short run an increase in the differential of the exchange rate by 1% can decrease the differential of the GDP by -0.83%, in either case the effects are not statistically significant in the long run analysis.

## 6. Discussion

Whilst we confirm the dimmed long run effects of the DCCE model with heterogeneous coefficients, a deeper examination into the theoretical foundations of the macroeconomic mechanisms that shape the impact of external debt on the long run growth would require future investigation.

Typical topic that needs clarification is the reason of this dimmed effect if it is general across countries or just a distinctive pattern of transition economies, or moreover a characteristic of the Western Balkan countries (Aristovnik, A. 2008).

Progressively the impact of external debt on economic growth can turn from insignificant to negative as shown by Saint-Paul (1992) using an endogenous growth model with overlapping generations. The majority of authors support the adverse effects of external debt, like Bulow *et al.* (1988), Sachs (2002), Ciftcioglu *et al.* (2008), Hameed *et al.* (2008) etc.

There are few authors that advocate the external debt neutrality on the long run economic growth, based mainly on the Ricardian equivalence like Barro (1988), or Abd Rahman *et al.*, (2019). Finally, there is limited evidence of long run positive effect of external debt on economic growth like Bakar *et al.* (2008), anyway Reinhart *et al.*, (2012) support the nonlinear pattern of external debt on economic growth. Accordingly, the impact can be positive or insignificant below a breakeven point of the debt-to-GDP ratio.

Another critical topic that needs further discussion is the debt management systems. Poor debt management systems can point to chronic indebtedness as shown by Ajayi (1991). Furthermore, poor management of the debt service, can aggravate the overall performance of macroeconomic indicators (Reinhart *et al.*, 2012).

## 7. Conclusions

The conclusion of this study, with respect to the average impact of government debt on long-term GDP growth in the four Western Balkan countries of Albania, Serbia, Macedonia, and Bosnia & Herzegovina over a 23-year period from 1997-2019, is consistent with the literature in that in the long-term external debt does not contribute to long-term growth and, in fact, tends to have a negative impact. Any additional negative shocks only serve to exacerbate the effort towards long-term growth. The COVID-19 pandemic shock has all but ensured that there will be no quick recovery in this region as all of them are experiencing record debt levels. Highly indebted economies have a much harder time recovering their long-term productivity losses – a function of limitations in their fiscal and monetary policies due to the high debt (Kose *et al.* 2020). If we are to add the long-standing challenges of weak political systems, volatile economies, crony capitalism, and corruption, in this region, within the current COVID-19 pandemic onslaught, the future outlook for long-term sustainable growth is grim.

## References

- Abd Rahman, N.H., Ismail, S. and Ridzuan, A.R. (2019), "How does public debt affect economic growth? A systematic review", *Cogent Business and Management*, Vol. 6 No. 1, p. 1701339.
- Aristovnik, A. (2008). Short-term determinants of Current account deficits: evidence from Eastern Europe and the former Soviet Union. *Eastern European Economics*, 46(1), 24-42.

- "Annual Report", by Bank of Albania, 1998-201 [https://www.bankofalbania.org/Publications/Periodic/Annual\\_Report/](https://www.bankofalbania.org/Publications/Periodic/Annual_Report/)
- "Annual Report", by Bank of Albania, 2015-2019 [https://www.bankofalbania.org/Publications/Periodic/Annual\\_Report/](https://www.bankofalbania.org/Publications/Periodic/Annual_Report/)
- Ajayi, S. IBI (1991) "Macroeconomic Approach to External Debt: The case of Nigeria ", Africa Economic research consortium, research number 8.
- Bakar, A. and Hassan, S. (2008), "Empirical evaluation on external debt of Malaysia", International Business and Economics Research Journal, Vol. 7 No. 2, pp. 95-108.
- Barro, R.J. (1989), "The Ricardian approach to budget deficits", Journal of Economic Perspectives, Vol. 3 No. 2, pp. 37-54.
- Bulow, J., & Rogoff, K. S. (1988). Sovereign Debt: Is to Forgive to Forget. American Economic Review, 79, 43-50. <https://doi.org/10.3386/w2623>
- CEIC Data, .. (2020). CEIC. Retrieved September 15, 2020, from Albania External Debt: % of GDP: <https://www.ceicdata.com/en/indicator/albania/external-debt--of-nominal-gdp>
- Chowdhury, K. (1994). A structural analysis of external debt and economic growth: some evidence from selected countries in Asia and the Pacific. *Applied Economics*, 26(12), 1121-1131.
- Chudik, A., and M. H. Pesaran. 2015. Large Panel Data Models with Cross-Sectional Dependence: A Survey. In The Oxford Handbook Of Panel Data, ed. B. H. Baltagi, chap. 1, 2-45. Oxford University Press.
- Chudik, A., M. H. Pesaran, and E. Tosetti. 2011. Weak and strong crossection dependence and estimation of large panels. *The Econometrics Journal* 14(1): C45-C90.
- Ciftcioglu, S., & Begovic, N. (2008). The relationship between economic growth and selected macroeconomic indicators in a group of Central and East European countries: a panel data approach. *Problems and Perspectives in Management*, 63(1), pp.24-30.
- Cohen, D. (1993). Low investment and large LDC debt in the 1980s. *American Economic Review*, 83(3):, 437-449.
- "Components of GDP growth" by Statistical Office and Ministry of Finance of the Republic of Macedonia
- "Country Report No.1/07" by IMF, 2001 [https://www.elibrary.imf.org/doc/IMF002/08842-9781451830101/08842-9781451830101/Other\\_formats/Source\\_PDF/08842-9781452741703.pdf](https://www.elibrary.imf.org/doc/IMF002/08842-9781451830101/08842-9781451830101/Other_formats/Source_PDF/08842-9781452741703.pdf)
- Ditzen J. Estimating Dynamic Common-Correlated Effects in Stata. *The Stata Journal*. 2018;18(3):585-617. doi:10.1177/1536867X1801800306
- Dornbusch, R., Krugman, P., Cooper, R. N., & v. N. Whitman, M. (1976). Flexible Exchange Rates in the Short Run. *Brookings Papers on Economic Activity*, 1976(3), 537.
- "Economic Reform Program for the Period 2018-2020", by Government of Republic of Serbia, 2020
- "Economic Reform Program for the Period 2018-2020", by Government of Bosnia and Hercegovina, 2020 [https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/bih\\_erp\\_2018-2020.pdf](https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/bih_erp_2018-2020.pdf)
- "Ex Post Evaluation of the Macro Financial Assistance to Serbia, Final Report", by European Commission, 2013
- Fischer, S. a. (2000). The transition economies after ten years (No. w7664). *National bureau of economic research*.
- Guex, G., Guex, S. Debt, economic growth, and interest rates: an empirical study of the Swiss case, presenting a new long-term dataset: 1894-2014. *Swiss J Economics Statistics* 154, 16 (2018). <https://doi.org/10.1186/s41937-017-0007-6>
- Hameed, A., Ashraf, H., & Chaudhary, M. (2008). External debt and its impact on economic and business growth in Pakistan. *International Research Journal of Finance and Economics*, 20, 132-140.
- Hansen, H. (2001). The impact of aid and external debt on growth and investment: Insights from cross-country regression analysis. *WIDER Conference on Debt Relief (Vol. 17, p. 18)*.
- Krugman, P. (1988). Financing versus forgiving a debt overhang. *NBER Working Paper 2486*.
- L.Gilbert., C., & Tabova, A. (2003). Realignment of debt service obligations. *Published by World Bank*.
- Lim, G., & Stein, J. (1995). The Dynamics of the Real Exchange Rate and Currency Account in a Small Open Economy: Australia. *Oxford University Press*.
- Mora, N., Sahay, R., Zettelmeyer, J., & Garibaldi, P. (2002). *What moves capital to transition economies?* Retrieved from IMF Working Papers: <http://ideas.repec.org/p/imf/imfwpa/02-64.html>
- Pesaran, M. H., and R. Smith. 1995. Econometrics Estimating long-run relationships from dynamic heterogeneous panels. *Journal of Econometrics* 68: 79-113.
- Reinhart, C.M., Reinhart, V.R. and Rogoff, K.S. (2012), "Public Debt Overhangs: Advanced-Economy Episodes since 1800," *Journal of Economic Perspectives*, 26(3), 69-86.
- Rodseth, A. (2000). *Open Economy Macroeconomics*. Cambridge University Press.
- Sachs, J. (2002). Resolving the Debt Crisis of Low-income Countries. *Brooking Papers on Economic Activity*.
- Saint-Paul, G. 1992. Fiscal Policy in an Endogenous Growth Model, *Quarterly Journal of Economics*, 107: 1243-1259.
- Semmler, W., & Tahri, I. (2017). Current account imbalances: A new approach to assess external debt sustainability. *Economic Modelling*, 62, 161-170.

- Shin, Y., M. H. Pesaran, and R. P. Smith. 1999. Pooled Mean Group Estimation of Dynamic Heterogeneous Panels. *Journal of the American Statistical Association* 94(446): 621 –634.
- Siddique, A., & Selvanathan, E. S. (2016). The impact of external debt on growth: Evidence from highly indebted poor countries. *Journal of Policy Modeling*, 38(5), 874-894.
- “Stabilization Policies and Structural Reforms in Albania Since 1997-Achievements and Remaining Challenges”, by T. Volker, 2002, IMF Policy Discussion Papers
- “Statistical Yearbook of Republic of Macedonia, 2001” by State Statistical office Republic of North Macedonia, 2002
- Trading Economics, .. (2020). *Trading Economics*. Retrieved September 15, 2020, from Bosnia And Herzegovina Government External Debt: <https://tradingeconomics.com/bosnia-and-herzegovina/external-debt>
- United Nations International Residual Mechanism for Criminal Tribunals <https://www.icty.org/en/about/what-former-yugoslavia>
- Western Balkans Regular Economic Report: Spring 2021, World Bank Report #19. April 1, 2021. <https://www.worldbank.org/en/region/eca/publication/western-balkans-regular-economic-report>
- World Bank, (2019). *Data*. Retrieved September 15, 2020, from [worldbank.org](https://www.worldbank.org/): <https://www.worldbank.org/>