Impact of Public Debt on the Economy in the Republic of Kosovo - Empirical Evidence

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Abstract

In addition to the various economic policies that governments use to achieve economic objectives and increase social welfare, public debt as a source of financing of the state budget is also used by governments of different countries. However, other macroeconomic indicators have a tremendous role to play in determining the level of short-term and long-term debt or the share of domestic debt and external debt. The aim of this paper is to investigate the impact of public debt on the economy of the Republic of Kosovo, using secondary annual data from 2009-2019. Data analysis was performed using multiple regression OLS (Ordinary Least Square). The results of the analysis confirm that public debt has a positive but statistically insignificant impact on the country's economy. Total debt also has a low positive correlation with GDP. This research will also analysis the theoretical and empirical literature related to public debt. In order for the effect of public debt to be higher on the economy and increase social welfare, the government must use these funds productively to finance various investment projects.

Keywords: Public debt, external and internal public debt, short-term and long-term debt, budget deficit, economic growth.

1. Introduction

One of the problems which is being faced by some countries in the management of the state budget is the high expenditure needs than state revenues. In fact, the majority of countries in the world would adopt a deficit budget policy, it means that from the outset of the budget, state spending has been designed to be greater than its income. The consequence of this budget deficit is the creation of the public debt to finance the state budget (Wibowo, 2017).

The rate of country's indebtedness is problems that are facing many growing nation since the beginning of the 21st Century. Therefore increasing levels of public debt of a country can be harmful to the growth of the economy of any country if not well utilized . Public debt can be classified into different types such as long-term debt when the debt is expected to last for a longer period of time and short-term debt if debt is designed to last for one or two years only. (Favor, Idenyi, Oge, Charity, 2017). Public debt can be divided by borrower to external and internal debt. The former is based on attracting foreign investors for buying government issued securities and borrowing from international financial institutions. The latter

comprises of borrowing within the country, using private banks and domestic investors as a main source. It is hard to determine which of these is more efficient. External debt holds more risk, since it is hard to negotiate with foreign investors for better terms in case of debt crisis. It also includes additional risks, such as exchange rate risk, if external debt is denominated in foreign currency. Meanwhile, domestic debt gives an opportunity to substitute delay of repayment with better tax rates, social guarantees. It is considered to be safer, since domestic debt could be looked at as a distribution of assets amongst ones who has excess and those who need it inside the country. However, high domestic government debt may result in reduced private credit flows. This would mean slower development on private enterprises and other economic initiatives. Consequently, it could lead to economic slowdown (Ribeiro, Vaicekauskas, Lakštutiené (2012).

In the majority of countries, public debt is accumulating and is still considered as a calamity for macroeconomic stability; in many countries, especially the ones that have experienced debt crisis, it causes fear of great disturbances and the breakdown of the state. However, due to a number of advantages over taxes, countries unwillingly renounce debt as a source of financing, especially in periods of extremely high, although short-term demand for public expenditures (wars, natural disasters, economic crises). The attraction of debt on the one hand and the danger lurking as a consequence of excessively enjoying in the benefits of the debt on the other hand, require constant caution and attention when using this fiscal policy instrument. It was this very necessity of rational debt management that stimulated economic science to study the public debt phenomenon, its causes and consequences, and to set optimal levels and sustainable boundaries of debt (Švaljek). Public debt is important as it may affect monetary policy, the political process, the international level of confidence for the country, the capital outflows and asset replacement. Transmission channels to a growing (reduction) effect of public debt on economic growth in the long term are: net savings channel, the channel of the cost of debt service, and the channel of national confidence level. Along the theoretical literature, regarding the contribution of the main economic schools on the relationship between public debt and growth, we can distinguish two main groups. On the one hand, they remain Classics, Neoclassics, Ricardian view who consider public debt as harmful to economic growth. On the other hand, we have Modern economists, who see debt as a stimulant of economic growth, but only if the funds are used for productive purposes. Separately these two groups stands the Conventional view, which states that, in the short term public debt show a positive effect on economic growth, while in the long run it displays a negative effect, which is transmitted through reduction of capital and national income. (Lici, Dika, 2016).

The increased uncertainties in the external environment during the year 2019 did not affect the dynamics of the domestic economy of the Republic of Kosovo, as real GDP growth is estimated to have marked an accelerated growth (4.2 per cent) compared to the previous year (3.8 percent). The acceleration of economic growth came as a result of the positive contribution of net exports and investments, while the domestic demand marked a lower positive contribution compared to the year 2018. (chart 5).

The dynamics in 2020 changed completely, after the rapid spread of the COVID-19

virus and the declaration of a pandemic by the WHO. Domestic demand is expected to shrink, while net exports are expected to deepen the trade deficit and consequently increase the negative contribution to GDP. Within the balance of payments of Kosovo, the net income from employee remuneration which is the main category of primary income, increased by 8.5 percent. Also, the balance of secondary income was characterized by an increase, mainly as a result of the higher level of remittances, which constitutes the largest category within the secondary income account. Remittance inflows marked the value of euro 851.7 million euros in 2019 and marked an annual increase of 6.4 percent. In 2019, FDI collected in Kosovo was almost the same as the previous year (271.8 million euros). Increase in FDI was recorded mainly in the real estate sector, rent and business activities as well as in the industry sector, while in the construction and commercial services sector there was a decrease in FDI. (FSR, 2020). The purpose of (The Law on the Public Debts) no. 03/L-175, grants the Government the right to borrow money, provide guarantee for the borrower, pay the expenses for getting the debt and pay the principal and the interest of the state debts. Except this, the right and responsibility is granted to the Minister of the Finance to take care of the entire management and administration of Debts and the authorised programs for the guarantee of borrowings in the Republic of Kosovo, including ceilings, the development of a Program for the Management of Debts and the Strategy for the Management of Debts. In no event shall the outstanding principal amount of Overall Debt exceed forty percent (40%) of the Gross Domestic Product (GDP). When it comes to Domestic Debt Management, for the instruments of securities, Central Bank of Kosovo as a fiscal agent of the Government of Kosovo, manages and administrates with the securities system. The International Debts of the Republic of Kosovo are subject to the agreements with foreign governments, government agencies, international financial organizations or other foreign organizations and companies according to the international agreements, treaties, conventions or other similar agreements which are subject to the laws of a legal jurisdiction other than that of the Republic of Kosovo. NAO, 2018) The structure of the total state debt consists of international debt, domestic debt and state guarantees. Based on the data from the end of 2017, the total state debt was 996.42 million euros, 574.27 of which was domestic debt and 422.15 was international debt. The guarantees were in the total amount of 44 million euros, recording a growth during 2017. The percentage of debt with fixed interest rate compared to variable interest rates was reduced. Debt with variable rates has increased but it continues to remain within the limit of 30% as is determined in SDP 2018-2020. Also,the average interest rate on the domestic debt portfolio from 2.1% at the end of 2016 decreased to 1.8% at the end of 2017. Historically, since the beginning of Securities issuance in 2012, the Ministry of Finance has focused on financing its budget mainly from the domestic market, thus contributing to the market development. The Ministry of Finance through the securities issuance strategy, in line with the objectives for reducing the risk of refinancing, has contributed to the gradual extension of portfolio maturity by building a more stable redemption profile. The maturity of issued securities is from 3-12 months for Treasury Bills and 1-7 years for Government Bonds. Foreign currency risk indicators have also declined. The adoption of the euro as a local currency has contributed to the reduction of currency

risk. Thus, 84% of the total debt is denominated in euro. Because of this indicator has declined compared to the previous year, the percentage of 16% of the total debt denominated in other currencies stays within the limit of 30% set in SDP 2018-2020. The rest of Kosovo's state debt is external debt, which consists of borrowings under the programmes1 with the International Monetary Fund (IMF), borrowings from the World Bank (WB), the German Bank for Development (KfW), European Bank for Reconstruction and Development (EBRD) and other low share creditors (SDP 2019 - 2021, (2018). The Government's main objective continues to be further strengthening of its fiscal position and accountable management of public finances. In line with the country's fiscal rule limiting the budget deficit to 2% of GDP. Given that this rule presents a limitation when considering Kosovo's needs for large development projects, the implementation of the 'Investment clause' allows the Government to finance capital projects of public interest over 2% deficit of GDP, provided that such projects are financed by International Financial Institutions and Development Agencies. (MTEF, 2019).

This research will analyse the impact of public debt on economic growth. The rest of the paper will be as follows: Chapter 2 will present the theoretical aspect related to public debt. The literature review will be summarized in Chapter 3. Chapter 4 presents the methodology and interpretation of the results from the data analysis. Conclusions and recommendations in Chapter 5.

2. Literature review

Theoretical aspects

There is value in classifying the major political economists who have examined public credit and public debt since 1700 as "pessimists," "optimists" or "realists." Public debt pessimists argue that government provides no truly productive services, that its taxing and borrowing detract from the private economy, while unfairly burdening future generations, and that high and rising public leverage ratios are unsustainable and will likely cause national insolvency and long-term economic ruin. Optimists contend that deficit-spending and public debt accumulation can stimulate or sustain economy activity and ensure full employment, without burdening present or future generation. Public debt realists contend that government can and should provide certain productive services, mainly national defense, police protection, courts of justice, and basic infrastructure, but that social and redistributive schemes tend to undermine national prosperity Realists say public debt should fund only services and projects that help a free economy maximize its potential. Realists insist that public debt analysis must be contextualized- that is, related to a nation's credit capacity, productivity, and taxable capacity (Salsman, 2012).

The first step towards measuring the effect of government borrowing on the economy is to understand the mechanism through which it can affect key macroeconomic variables. Governments use fiscal policy to influence the level of aggregate demand in the economy in an effort to achieve economic objectives of price stability, full employment, and economic growth. Keynesian economics suggests that increasing government spending and decreasing tax rates are the best ways to stimulate aggregate demand. Keynesians argue that this method can be used in times of recession or low

economic activity as an essential tool for building the framework for strong economic growth and working towards full employment. In theory, the resulting deficits would be paid for by an expanded economy during the boom that would follow (Essien, Agboegbulem, Mba, Onumonu, 2016).

Theoretical explanations for possibly negative growth effects of public debt mainly focus on fiscal deficits and argue for a trade-off between positive short-run effects (in case of an output gap and stickiness of prices and wages) and negative long-run effects. Growth impeding long-run effects are caused by changes in expectations of market participants at high levels of public debt, leading to a decrease of national savings and, consequently, to an increase of interest rates, less investment and higher risk premia (Elemendorf and Mankiw 1999; Greiner 2014). Consequently, uncertainty rises and additionally fiscal flexibility for productive government spending is reduced with negative effects on growth (Teles and Mussolini 2014), cited in (Ahlborn, Schweickert, 2015).

The group of economist collectively called classical economist developed a policy prescription about economy the core of which was the limited role it would assign to the government and a belief in the self-equilibrating capability of market termed by Smith 'invisible hand'. As government was not assigned the role in the economy beyond providing some basic services (public goods) and to create apparatus whereby market functions efficiently there was hardly any role for the fiscal policy to regulate things in the economy. Smith, hailed as father of 'classical political economy' (the name by which economics was then known), maintained public budget to follow the prudence of a family budget where expenditures are advised to be limited to the income and the borrowing only in the emergencies. While fluctuations in the economic activity were not ruled out but they would be addressed by the forces of self correction activated by the economy itself. Thus the governments attempt to intervene would amount to injecting the sources of instability. Fiscal profligacy was considered to be one such source of instability. (Khan, Aziz 2015).

The Ricardian Equivalence argument suggests that tax financing and debt financing of government spending have the same effects on the behavior of economic agents with a perfect forecast. In Ricardo's economic analysis, the law of markets provides an economy that functions with full employment. So there is no need for public spending to stimulate aggregate demand, for a loan-financed increase in government spending is accompanied by an equal reduction in private spending. Funds that would have been spent privately would be taxed and spent by the government. This has a depressing effect on savings, investment and growth, due to the assumption that while some private spending is productive (in more modern terms they are investment spending rather than consumption spending), all (or almost all) public spending is unproductive. If borrowing occurs for long-term productive investments in equipment, materials or skills, then future production will reap the benefit in the form of additional income, which can then be used to repay the principal and interest on the loan. However, borrowing for consumption purposes increases current consumption expenditures and reduces future consumption expenditures by a greater amount. Thus, according to Ricardo, distant sacrifices of the future are required to finance current consumption expenditures beyond the capabilities of a

nation (Churchman, 2001).

According to the "conventional view of public debt" (Elmendorf and Mankiw, 1999), in the short-run output is demand-determined and fiscal deficits (or higher public debts) have a positive effect on disposable income, aggregate demand, and overall output. This positive short-run effect of budget deficits (and higher debt) is likely to be large when the output is far from capacity. According to Elmendorf and Mankiw (1999), things are different in the long-run. If Ricardian Equivalence does not hold, the decrease in public savings brought about by a higher budget deficit will not be fully compensated by an increase in private savings. As a consequence, national savings will decrease, resulting in lower total investment, either at home or abroad. Lower investment at home will have a negative effect on GDP, as it will lead to a smaller capital stock, higher interest rates, lower labor productivity and wages. Lower foreign investment (or higher foreign inflows), instead, will have a negative effect on foreign capital income and will thus lower the country's future GNP. This negative effect of an increase in public debt on future GDP (or GNP) can be amplified by the presence of distortionary taxes, cited in (Panizza, Presbitero, 2013).

Lerner's analysis of the role of budget deficits and their implications on the debt is carried out at a very general level. For Lerner, there is no reason to hold that public expenditures and revenues must necessarily balance over a longer period of time. The government can run public deficits permanently, if this is necessary to ensure the required level of effective demand. For Lerner, the public budget in general is the instrument through which the government maintains the level of demand that ensures the full employment of the existing resources. He does not enter into a more a detailed analysis of the public budget and, in particular, he does not make any distinction between the current and the capital budget. Keynes, instead, enters into a more detailed analysis of the budget and argues that full employment should be ensured and maintained through variations of the capital budget, whereas the current budget should be maintained balanced. A fundamental feature of this Keynesian approach is that the public debt cannot be regarded and dealt with as if it were the same as the private debt. In particular, it is no true that the public debt must be necessarily extinguished. A change in the composition of public spending in favor of productive spending stabilizes the debt ratio because it increases the growth rate of the economy to a higher level than the interest rate (Sardoni, 2013).

The theory of non-Keynesian effects is another theory to explain the negative impact of public debt on economic growth. However, the theory of non-Keynesian effects states that fiscal expansion reduces consumer demand, but does not necessarily cause a decline in economic growth. On the contrary, because it leads to a reduction in consumption and an increase in savings, fiscal expansion is assumed to lead to an increase in capital accumulation and an increase in the rate of economic growth (excluding other problems such as price rigidity), according to the theory of non-Keynesian effects. Moreover, the theory of non-Keynesian effects assumes that fiscal expansion causes a short-term contraction in demand, but not a long-term decline in economic growth that lasts up to 10 years, as shown by verification results from Reinhart et al. (Kobayashi, 2015).

The theory of Double Gap Analysis developed by Chenery and Strout (1966) states

that for the underdeveloped economy, to gain a specific growth rate, there are two different autonomous types of barriers, the savings gap and the foreign exchange gap. According to him, the flow of foreign resources and the favorable pace of targeted economic growth will fill these gaps. In summary, the theory explained that investment brings about a development and an investment such as this that requires domestic savings, if the savings are not sufficient to ensure development or economic growth, then the probability of receiving the amount that can be invested in any country with the same amount saved from abroad, cited in (Otieno, 2017).

With respect to James Buchanan's public debt theory, it is possible to distinguish between narrow and broad treatments. The narrow treatment would treat public debt as transferring wealth among generations. The broader treatment that arises through rational reconstruction would allow for transfers within a generation and with those transfers extending across generations as well. Buchanan's base claim that public debt shifts cost from present to future is not literally correct because generations are not acting entities, and yet his formulation points in the correct direction which is missed by proponents of fiscal policy and which is also consistent with his body of work in political economy and public finance (Wagner, 2013).

3. Literature review

3.1 Empirical aspects

The purpose of Nyangang - Ndieupa (2018) was to investigate the impact of public debt on economic growth using panel data from CEMAC Central African countries over the period 2000 - 2016. Empirical results show that the public debt ratio has a negative coefficient and statistically very significant. The results showed that the higher the public debt in a country, the lower the economic growth.

Bilan, Ihnatov (2015) studied the relationship between public debt and economic growth for a panel of 33 European countries (28 European Union Member States and 5 candidate countries to European accession) over the period 1990-2011. More specifically, we investigate if there is evidence of a non-linear (quadratic) relationship, both for the entire European countries group and for the developed and developing countries subgroups. The results confirm the existence of a (U inverted) relationship, with a maximum debt threshold of about 94% of GDP. After this threshold public debt is expected to negatively affect the economic growth rate, due to higher interest rates, fear of public debt unsustainability and severe budgetary consolidation measures. However, this threshold is found to be more than twice lower in developing European countries compared to the developed ones, as the former enjoy lower credibility, higher vulnerability to shocks and depend more on external capital transfers.

Attapattu, Padmasiri, (2018) examines the impact of public debt on economic growth in Sri Lanka over the period of 1977 to 2012. The study adapted Auto Regressive Distributed Lag model.

Matthew, Mordecai, (2016) examined the impact of public debt on economic development of Nigeria using annual time series data spanning 1986 to 2014. The study employed the Augmented Dickey-Fuller test, Johansen co-integration test, Error Correction Method (ECM) and the Granger Causality test. The Johansen co-integration test results revealed the presence of a long-run relationship among

the variables viz; external debt stock, domestic debt stock, external debt servicing, domestic debt servicing and economic development (proxied with GDP per capita) in Nigeria. The ECM results revealed that external debt stock and external debt servicing have insignificant negative relationship with economic development in Nigeria, however, domestic debt stock has a direct and significant relationship with economic development while domestic debt service payment was significant but inversely related to economic development in Nigeria. The Granger Causality Test found that there is no causal relationship between external debt burden and GDP per capita, while there is a causal relationship between domestic debt burden and GDP per capita in Nigeria.

Jacobo, Jalile (2017) examined the impact of government debt on GDP in 16 Latin American countries over a period of about fifty years (1960 - 2015). The authors found a non-linear statistically significant high relationship between the government debt ratio and the GDP growth rate per capita for Latin American countries. The short-term impact of debt on GDP growth is positive, but decreases to zero beyond public debt-to-GDP ratios between 64 and 71%(i.e. up to this threshold, additional debt has a stimulating impact on growth).

To explore the link between government debt-to-GDP ratio and real per capita income growth in Italy over 1861-2009, Balassone, Francese, Pace, (2011) We model our regression analysis on a standard production function. Our results support the hypotheses of a negative relation between public debt and growth and of a stronger effect of foreign debt compared to domestic debt before World War I. The effect of public debt on growth appears to work mainly through reduced investment. These results help explain the different reaction of per capita GDP growth to the debt-ratio over 1880-1914 (when the negative correlation between the two variables is particularly strong) and 1985-2007 (when the correlation appears to break down when debt starts declining).

Khan, Rauf, Mirajul-haq, Anwar (2016) analyzed the impact of public debt on economic growth of Pakistan that cover the period 1972 - 2013. Empirical analysis was performed through the ARDL cointegration technique. The empirical results of this study showed that that public debt and economic growth has positive but statistically insignificant relationship, showed that it plays no role in the process of economic growth.

To explores the relationship between the ratio of government debt to Gross Domestic Product (GDP) and the per capita GDP growth rate, Dincă, Dincă (2015) used a sample of 10 former Communist countries, currently members of the EU 27, (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia and the Slovak Republic) for the period 1999-2010, using a quadratic equation. The results show a statistically significant non-linear relationship between the government debt to GDP ratio and the per capita GDP growth rate for all the analyzed countries. According to the authors, the government debt turning point is around 50%. If the government debt to GDP ratio exceeds this level, it could generate a negative impact on the GDP growth rate. After performing various tests, they concluded that only four variables have a statistically significant impact upon the GDP growth rate: gross government debt as share in GDP, nominal short term interest rate, openness of the

economy and total government revenue as percentage of GDP.

Spilioti (2015) analyzed the average impact of government debt on GDP growth in the Euro area countries using data from the period 1981-2014. The empirical results suggest that the impact of debt on economic growth is positive and statistically highly significant. In our estimation of the growth equation the author also includes some other control variables such as: 1) the variables capturing the impact of inflation, 2) the indicators of the openness of the economy and the external competitiveness, and 3) other control variables related to the demographic characteristics of the economy as well as indicators that expected to influence the future investments. Using a combination of time-series and cross-section data (panel data analysis), the results also suggest that the inclusion of several other control variables in estimating the growth equation has a significant impact on GDP growth.

Pereima, Merki, Correia (2015), addresses the non-linear and heterogeneous relationship between public debt and economic growth, controlling the results by an institutional quality multidimensional indicator. To address the problem of unobserved heterogeneity, the authors suggested a two-stage procedure applied to a large sample of 154 countries, covering the period 1990-2012, using e cluster analysis to group the countries by their governance quality. In a second step the relationship between public debt and growth is investigated using simple and threshold multiple panel regression models (TMR). The results confirm the coefficients to be negative in the long-run and to vary across country groups depending on institutional quality.

To examine the impact of public sector borrowing on prices, interest rates and output in Nigeria, Essien, Agboegbulem, Mba, Onumonu (2016), Utilized a Vector Auotoregressive framework, the Granger causality test, using annual data for the period 1970 - 2014. However, the level of external and domestic debt over the period of this study had no significant impact on the general price level and output. The decomposition of variance showed that the values of real GDP in Nigeria were not explained by the level of external debt or domestic debt throughout the period covered by the study. The Granger test shows that the increase in real GDP was not caused by past values of external or domestic debt.

Wibowo (2017) examined the relationship between public debt and economic growth in eight countries in Southeast Asia that are members of ASEAN. Through the study will contribute reference for each country to establish their macroeconomic policies. Using 10 years of data from 2006 to 2015 and analysis tools Autoregression Vector (VAR), the study attempts to test the theory of finance led growth. The main finding of this study is that public debt is actually able to increase the economic growth of a country significantly, although it takes a few years of its existence. Granger causality test shows no causal relationship between the public debt and economic growth in the ASEAN countries. These results show results in the short term, while in the long run the variables show a close relationship

Empirically investigates the short and long-run impact of public debt on economic growth.Gomez-Puig, Sosvilla-Rivero, (2017) used annual data from both central and peripheral countries(11 member states) of the Eurozone (EA) for the period 1961 - 2013 and estimate a production function augmented with a debt stock term by applying the Autoregressive Distributed Lag (ARDL) bounds testing approach.. The results

suggest that public debt always has a negative impact on the long-run performance of EA member states, whilst its short-run effect may be positive depending on the country.

To examine the impact of public debt on economic growth in 23 OECD countries classified into four groups in terms of their average debt-to-GDP ratio over the period 1996-2007, Dar, Amirkhalkhali (2014) used a general empirical methodology, which is also likely to be better able to represent the law relating economic growth to its determinants. Empirical results indicate that the marginal impact of debt is negative but very small and statistically insignificant in almost all cases. In the case of the country-specific estimates of the model, the impact of the debt-to-GDP ratio on growth was mixed but still insignificant for all countries except Luxembourg and the USA.

Ribeiro, Vaicekauskas, Lakštutienė (2012) investigated the effects of various macroeconomic indicators on GDP, with an emphasis on debt related predictors, using a multiple linear regression model. A total of 13 countries were selected using data from 2000 - 2011 - with 47 quarterly surveys. Findings of this research confirm the hypothesis that country determinants influence the efficiency of public borrowing and its effect on GDP. Findings of this research confirm the hypotheses that the public debt level may have a significant impact on GDP, something which is worrying as in some cases it has a negative impact. Nevertheless, this varies from country to country because of specific country differences. Sweden, Germany, Hungary and Portugal are affected positively by public debt and the results are significant. Conversely, Belgium and Estonia experienced significant negative effect. On the contrary, private borrowing showed a positive effect on the economy in every country where it resulted statistically significant.

Pegkas (2018) researched the relationship between economic growth and several factors (investment, private and government consumption, trade openness, population growth and government debt) in Greece, where imbalances persist several years after the financial crisis. The ARDL and ADF test from 1970 - 2016 are used. The results reveal a long-run relationship between variables, as private and government consumption and trade openness affect positively growth. Specifically, at debt levels before 2000, increases in the government debt-to-GDP ratio are associated with insignificant effects on economic growth. However, as government debt rises after 2000, the effect on economic growth diminishes rapidly and the growth impacts become negative.

4. Data and methodology

There are two different views on the impact of public debt on the economy. According to classical economists, public debt has no effect on economic stimulation because according to them these funds will be used unproductively, while according to modern economists public debt should be used as a source of funding, but according to them these funds should be used to finance projects which affect the growth of economic prospects in any country. In the empirical literature most of the research argues that short-term debt has a greater impact on economic growth, but its effect is declining

in the long run. Also, according to the empirical literature the impact of public debt is with higher effect in developed countries than in developing countries. The data used to analyze public debt are different in different countries. Some research has used aggregate data on public debt, some have made the division of government loans into short-term and long-term as well as domestic and foreign loans, but most empirical research has done the classification of loans into short-term and long-term. The Republic of Kosovo as a young state which gained independence in 2008, does not have a ancient history of taking on public debt. Because in the relevant institutions in the country we still do not have the classification of public debt into short-term and long-term debt, and since, the domestic public debt secured through the issuance of securities has started only from 2012, to analyze the data related with the impact of public debt and its impact on the economy, the authors have been forced to use aggregate data on public debt in the Republic of Kosovo (Table 3).

In the empirical literature, among other models, the multiple regression model has been used, therefore in this empirical research to analysis the data related to the impact of public debt on the economy, we use the OLS model, using the secondary annual data from 2009 - 2019 provided by the Ministry of Finance, Kosovo Agency of Statistics and the Central Bank of Kosovo.

Tabela 3. Data on Nominal GDP, Total State Debt, Direct Foreign Investment and Inflation (in Millions of euros)

Years	International State Debt	Domestic State Debt	Total State Debt	Total State Debt (% of GDP)	GDP – Kosovo	Real Increase of GDP	FDI (€)	FDI (%)	Inflation (%)
2009	249.01	0	249.01	6.37	4069.6	3.6	287.4	-22.3%	-2.4
2010	260.42	0	260.42	6.22	4402.0	3.3	368.5	28.2%	3.5
2011	253.6	0	253.6	5.51	4814.1	4.4	384.4	4.3%	7.3
2012	336.6	73.31	409.92	8.44	5058.9	2.8	229.1	-40.4%	2.5
2013	323.76	152.51	476.27	9.1	5326.6	3.4	280.2	22.3%	1.8
2014	326.35	256.52	582.87	10.63	5567.5	1.2	151.2	-46.0%	0.4
2015	371.17	377.78	748.95	13.07	5807.5	4.1	308.8	104.3%	-0.5
2016	373.77	478.97	852.74	14.38	6070.1	4.1	220.0	-28.8%	0.3
2017	422.15	574.27	996.42	16.62	6413.9	4.2	255.4	16.1%	1.5
2018	416.43	676.62	1,093.05	16.9	6726.1	3.8	272.1	6.6%	1.1
*2019	409.1	791.94	1,201.05	17.46	7079.6	4.2	271.8	-0.1%	2.7

**GDP for 2019 is taken from the amount of quarterly GDP.*
Source: CBK, KAS and MF and calculation of authors (2020)

In this empirical research, to analysis the effect of public debt on economic growth and development and increase social welfare the econometric model used is as follows.

$\Delta GDP=\beta_1+ \beta_2\Delta\ TSD+\beta_3\Delta INV + \beta_2\Delta\ INF + u$

Where GDP shows annual GDP at current prices expressed in millions of euros, β1

is the parameter for intersept, TSD shows the real value of total government debt in millions of euros, which variable is expected to have a negative effect, aggregate INVs represent the real value of Investments Foreign Direct Expenses expressed in millions of euros, which variable is also expected to have a negative effect, INFL is the inflation rate taken from the Average Annual Consumer Price Index which expresses the price difference from one year to another (from 2015 = 100), which variable is expected to have a negative value, and u - is the unexplained part. The value of the "p - values" coefficients of the independent variables are with a significance of 5 percent, to achieve the results related to the impact of public debt on economic growth. In the model used the dependent variable is GDP, while the independent variables will be: Total State Debt (TSD), Investment (INV) and Inflation (INF). The results obtained from this empirical study will be for the period 2009 - 2019.

4.1 Analysis results and their interpretation

Tables 4 and 5 present the results obtained from the statistical description for the dependent variable which is GDP and the independent variables such as Total State Debt, Foreign Direct Investment and Inflation for the period 2009-2019, such as: Mean, Std. Deviation, Minimum, Maximum. The data used to obtain the results from the statistical description are expressed in percentage.

Tabela 4. Descriptive Statistics

	Mean	Std. Deviation	N
GDP	3.473	.9477	11
FDI	17.55	37.498	11
INFLATION	1.73	2.412	11
TOTAL DEBT	11.27	4.563	11

Source: Calculation of authors (2020)

Tabela 5. Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.009	4.094	3.473	.3736	11
Residual	-2.2012	.9912	.0000	.8710	11
Std. Predicted Value	-1.242	1.662	.000	1.000	11
Std. Residual	-2.114	.952	.000	.837	11

a. Dependent Variable: GDP

Source: Calculation of authors (2020)

4.2. Interpretation of results

For the results obtained from the analysis of data related to the impact of public debt on the economy for the period 2009 - 2019, the statistical program SPSS was used. Data analysis (Table 6) shows that the dependent variable (GDP) has a low correlation with the independent variables (TSD, INV, INF) at the level of .394. The coefficient of determination of .155 indicates that 15 percent of the change in the dependent variable depends on the changes in the independent variables. The

Durbin Watson test is a diagnostic tool used to test a regression model. It measures the presence of autocorrelation in the waste. Its value varies between 0 and 4. The model is considered the best if its value is 2. Normally, a value between 1.5 and 2.5 is acceptable. [1]A value of 2,204 from the Durbin Watson test analysis indicates that there is a very weak negative autocorrelation.

Table 6: Summary of the econometric model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Ëatson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.394a	.155	-.207	1.0410	.155	.429	3	7	.738	2.204

a. Predictors: (Constant), TOTAL DEBT, INFLATION, FDI
b. Dependent Variable: GDP

Source: Calculation of authors (2020)

The multiple regression model was used to assess the effect of public spending on economic growth and development in the Republic of Kosovo (Table 7). The results obtained from the multiple regression model show that the effect of public debt is positive but statistically not significant at the 5 percent level of significance. Also, the research results show that Foreign Direct Investment (FDI) has a negative sign and is statistically insignificant because the P - value is .611. In this analysis, the explanatory variable of the inflation rate has a positive sign but is not significant at the level of 5 percent of significance. The research results showed that no statistically significant linear relationship was found between economic growth and public debt, and other macroeconomic determinants such as Foreign Direct Investment and Inflation. So economic growth is not dependent on three explanatory variables.

Table 7: Regression summary

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Loëer Bound	Upper Bound
1	(Constant)	2.563	.970		2.642	.033	.269	4.856
	FDI	-.005	.009	-.191	-.532	.611	-.026	.017
	INFLATION	.065	.141	.166	.462	.658	-.268	.398
	TOTAL DEBT	.078	.076	.377	1.036	.335	-.100	.257

a. Dependent Variable: GDP
Source: Calculation of authors (2020)

The ANOVA test allows a comparison of more than two groups at the same time to determine if there is a relationship between them. The result of the Anova formula, the F statistics (also called the F-Ratio), allows the analysis of multiple data sets to determine variability between samples and within samples. The analysis uses the ANOVA test to determine the impact that independent variables have on the

[1] Ibf.org/knowledge/glossary/durbin-watson-dw-test-97, info@ibf.org, (2020)

dependent variable in a regression study[2]. If the significance level is greater than 0.05, the survey results (Table 8) show that there is no statistically significant difference between means. So for F = .429 the "p" value for .429 is .738, which means that the results obtained from the analysis are not statistically significant.

Table 8. Anova tests

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.396	3	.465	.429	.738b
	Residual	7.586	7	1.084		
	Total	8.982	10			

a. Dependent Variable: GDP
b. Predictors: (Constant), TOTAL DEBT, INFLATION, FDI
Source: Calculation of authors (2020)

Correlation means association - more precisely it is a measure of the extent to which two variables are related. There are three possible results of a correlational study: a positive correlation, a negative correlation, and no correlation. A **positive correlation** is a relationship between two variables in which both variables move in the same direction. Therefore, when one variable increases as the other variable increases, or one variable decreases while the other decreases. A **negative correlation** is a relationship between two variables in which an increase in one variable is associated with a decrease in the other A **zero correlation** exists when there is no relationship between two variables. [3]The results of the analysis in this research (Table 9) show that GDP has a very low negative correlation with Foreign Direct Investment (FDI); GDP also has a very low positive correlation with inflation, also GDP has a low positive correlation with total debt. FDI has a very low negative linear relationship with GDP, FDI also has a very low negative correlation with inflation, but FDI has a very low positive correlation with total debt as well. Inflation has a very low positive correlation with GDP, while a very low negative correlation with FDI and total debt. Total debt has a low positive correlation with GDP, total debt also has a very low positive correlation with FDI, but total debt has a very low negative correlation with inflation.

Table 9. Correlation analysis

		GDP	FDI	INFLATION	TOTAL DEBT
Pearson Correlation	GDP	1.000	-.131	.115	.296
	FDI	-.131	1.000	-.165	.234
	INFLATION	.115	-.165	1.000	-.220
	TOTAL DEBT	.296	.234	-.220	1.000

[2] www.investopedia.com>terms > anova.
[3] www.simplypsychology.org/correlation.html

Sig. (1-tailed)	GDP	.	.351	.369	.189
	FDI	.351	.	.314	.244
	INFLATION	.369	.314	.	.258
	TOTAL DEBT	.189	.244	.258	.
N	GDP	11	11	11	11
	FDI	11	11	11	11
	INFLATION	11	11	11	11
	TOTAL DEBT	11	11	11	11

Source: Calculation of authors (2020)

Conclusions and recommendations

The purpose of this research was to assess the impact of public debt and other macroeconomic determinants on economic growth and development in the Republic of Kosovo, using secondary annual data from 2009-2019. Data analysis was performed using the multiple model of regression (OLS). Based on the results achieved from the data analysis, public debt has a very low positive effect (.078) but statistically insignificant on economic growth in the Republic of Kosovo during the research period. Foreign Direct Investment (FDI) also has a very weak (-.005) and statistically insignificant negative effect on the economy. The other variable, inflation have a positive and insignificant effect. The results of the analysis also show that GDP has a negative correlation with FDI, GDP also has a low positive correlation with inflation as well as GDP has a low positive correlation with public debt. Total debt has a low positive correlation with GDP, total debt also has a low positive correlation with FDI, and total debt has a negative correlation with inflation.

Numerous empirical studies on the impact of public debt on economic growth and development rather dominate their negative impact on the economy compared to their positive impact. The results of our research are consistent with these empirical researches. Also, the results of empirical research have estimated that the ratio of public debt to GDP is high in both developed and developing countries (in developed countries the ratio of public debt to GDP reaches up to 90%, while in countries in development this ratio reaches up to 50%). It is very important that this ratio of public debt to GDP decreases in both developed and developing countries. Especially important is that borrowing as a source of financing should not be used to cover previous public debt, because this can cause a financial crisis in the state budget but also a loss of trust in international financial institutions and other countries. According to the literature, most developing countries face very high public debt, while in the Republic of Kosovo, although there is an increase in the ratio of public debt to GDP from year to year (ratio of total debt to GDP in 2019 is 17.46%), this increase is still within the law on public debt management (according to the law the ratio of public debt to GDP can reach up to 40%).

Due to the low ratio of public debt to GDP, the government of the country still has to provide public debt to finance the state budget. But public debt should only last until the government manages to meet its financial obligations on time. Also, these funds should be used more efficiently in various investment projects which would affect

economic growth and increase social welfare. According to empirical research, the country's economic policies should enable the efficient use of public borrowing and its impact on GDP. Since in the Republic of Kosovo there is no risk of issuing primary money by the Central Bank due to the adoption of Euro as the official currency, then to increase the amount of money in circulation securing public debt to a stable level in relation to GDP is necessary for the country's economy without increasing the tax burden on the taxpayer. However, as private savings in the country are still low, this makes it impossible to make investments, and as a result, the government must to be very careful about securing public debt for the long term. Although both types of public debt; Internal and external debt have advantages and disadvantages

According to them, it is more advantageous for the country's economy for the domestic debt trend to be higher in the future than the external public debt because this makes it impossible for capital to flow out.

Another reason why the government should continue to further increase the level of domestic public debt through the issuance of securities is that commercial banks have a high profitability and sufficient liquidity. Also, the issuance of government securities, such as bonds, must have a maturity of longer than 7 years.

Of extremely high importance to the government is that public debt as a source of financing must be secured at a relatively low cost. Also, the government of the country should develop new debt financial instruments through diversification in order to reduce risk and create alternative sources of financing. Relevant institutions in the country should also enable the division of public debt into short-term debt and long-term debt because this enables a clearer definition of which type of public debt has the greatest impact on the economy.

Because empirical research on public debt and its impact on the country's economy is scarce, and also because the country's government have not a long period of debt realization, whether external debt or domestic debt, in the future researchers should analysis this problem. Also the explanatory variables should be expanded in the future as; government spending, private consumption, private sector loans, imports and exports.

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