Public Expenditure and Economic Growth in the Republic of Kosovo - Empirical Evidence

Ass. Prof. Dr. Lumnije Thaçi
Faculty of Mechanical and Computer Engineering, Department of Economic Engineering, University of Mitrovica "Isa Boletini", Kosovo

Mrs. Arbnora Gërxhaliu
Candidate of the Society of Certified Accountants and Auditors in Kosovo (SCAAK)

Abstract

In developing countries, it is still a controversial issue whether or not public spending can affect economic growth or not. Therefore, to enrich the literature on this phenomenon, the purpose of this paper is to study the impact of total public expenditure on economic growth and development in the Republic of Kosovo using secondary data from 2008 - 2018. Multiple regression model will be used for data analysis. The results of the analysis show that total government spending has a negative and non-significant impact on economic growth in the country. Also, GDP has a weak negative correlation with public spending. In this research we have also disaggregated the data by dividing total public expenditures into current expenditures and total capital expenditures, where both indicators, current expenditures and total capital expenditures have a negative and insignificant impact on economic growth. The data analysis also shows that GDP has a weak and negative correlation with current expenditure and total capital expenditure, while there is a positive but very weak correlation between current expenditure and capital expenditure. For public spending to have a positive effect, they must be used productively, using sector funds that are considered most important by policy-makers for the country's economic development.

Keywords: Total government expenditure, current expenditure, capital expenditure, economic growth, developing countries, developed countries.

1. Introduction

James Buchanan, concluded that public finances study the economic activity of the government as an entity (socially-economic). He advocates that the science of public finances must contain two stages: the first stage defines what the government`s goals are and how efficient are its efforts in achieving them; the second stage defined behavioural changes of individuals in private or market economy (Păun, Brezeanu, 2013).

The government's role is increasing almost in all economic system. Public expenditure in real terms can be used as an indicator of the size of government activities financed by the Government public revenue in modern secular states generally consists of two types, namely the current budget and the capital budget. Current budget is used to meet the expenditure on aspects of civil administration, defence, the cost of servicing the debt, and more, while the capital budget is usedfor the construction of infrastructure, educational institutions, health facilities, telecommunications, defence

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projects, dams, canals, power plants, highways, and train. (Jaelani, 2018).

At the most aggregated level, the composition of public expenditures has an impact on the output of the public sector and its economy-wide outcome. The composition of public spending affects the performance of the public sector (output) through several channels. First, a high share of non-discretionary expenditures limits the room for manoeuvre of the government and consequently reduces the possibility to have a well-targeted economic policy. Second, the composition of expenditures reveals the priority setting of an economy, e.g. when a large share of spending is devoted to future-oriented areas such as education and R&D. Finally, it allows to draw conclusions on the focus of the State on its Musgravian functions (stabilisation, growth, adjustment) (Mandel, Dierx, A lzkovitz, 2008).

There are two main hypotheses related to real government expenditures and growth. The Wagner's hypothesis argues that growth of an economy leads more government spending

while the Keynes's hypothesis proposes that government expenditures feed higher economic growth. From policy perspectives, Keynesian view gives a dominant role in government intervention for higher growth while Wagner view gives just a passive role to the government in economic policy. Effects of resource allocation between public and private sectors have been subjects of many studies. On the one hand, Wagner's hypothesis states that growth of an economy leads people to demand more public goods which in return cause higher government expenditures. On the other hand, the Keynesian hypothesis states that expansionary government expenditures improve economic growth (Gumus, Mammadov, 2019).

Economic theory does not automatically generate strong conclusions about the effect of government expenditure on economic performance. Indeed, most economists would agree that there are circumstances in which lower levels of government spending would enhance economic growth and other circumstances in which higher levels of government spending would be desirable. Economic theory is important in providing a framework for understanding how the world works, but evidence helps to determine which economic theory is most accurate (Mitchell, 2005).

The substantial growth of the size of government expenditures in both the developed and developing nations since World War II, and its effect(s) on long-run economic growth (or vice versa), has spawned a vast literature that offers diverse attempts to explain the observed phenomenon. (Loizides, Vamvoukas, 2005).

The uncertainties raised in the external environment during 2018 appear to have also affected the dynamics of the economy of the Republic of Kosovo, although the real GDP growth is estimated to have been similar to the previous year. The slower economic growth in the Eurozone and Kosovo's main trading partners in 2018 and the dynamics of the domestic economy resulted in the deterioration of the country's net exports position. Consequently, although the macroeconomic environment appears to have been stable, real GDP growth, according to CBK estimates, stands at 4.0% (Figure 1). The increase in aggregate demand during 2018 is mainly driven by the increase in consumption and investment. During the reporting period, the increase of new investment loans and capital expenditures by the Government led to an increase in investments in the country by 14.4%. (FSR, 2019).

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Figure 1. Real GDP growth rate and contributors to the growth

Source: KSA and CBK assessmet for 2018 (2019) cited in (FSR, 2019)

Government capital expenditure increased by 13.4% (5.4% in 2017). Also, changes in tax policy over the past years are estimated to have had an impact on stimulating investment. Also, public consumption has been characterized by a significant increase, where within the budget expenditures, current expenditures have increased by 9.2% in 2018 (5.0% in 2017) (CBK, 2018). In 2018, the dynamics that characterized the fiscal sector resulted in a higher increase in budget expenditures (10.3%) versus budget revenues (4.5%). The high increase of budget expenditures compared to the previous year, but also against revenues, has led to the increase of primary budget deficit to 2.4% of GDP. In 2018, public debt was also characterized by an increase of 9.7%. As a percentage of GDP, public debt reached 17.1%, from 16.2% in 2017. Public debt growth attributed to 17.8% domestic debt growth, while external public debt dropped 1.4% (FSR), 2019.

In terms of investments, foreign direct investments, (FDI) were characterized with negative dynamics, which in 2018 marked a real decline of 16.3%. Consumption as the main component of domestic demand recorded real growth of 3.7%, supported by growth in private consumption of 3.8% and public consumption of 5.7%. Private consumption growth during 2018, similar to the previous year, continued to be supported mainly by the increase in remittances and the increase in bank lending. Remittances recorded a growth rate of 5.4% (9.9% in 2017).New consumer loans increased by 10.4% (14.0% in 2017). Unlike 2017 when the net exports component contributed positively to real GDP growth, in 2018 this component turns out to have had a negative contribution to GDP. Real growth of export of goods and services by 1.4% and import of goods and services by 8.1% has led to a deepening of the trade deficit (goods and services) by 22.6% in real terms (CBK, 2018). The slowdown in the rise in prices of major commodities in international markets led to a slower price increase in Kosovo in 2018 as well. Average annual inflation rate, expressed through the Consumer Price Index (ICK), increased by 1.1% in the year 2018 (1.5% growth in 2017) (FSR, 2019).

The Central Fiscal Authority (CFA) in Kosovo was established after the War at the end of 1999 with the aim of administering the policy and management of tax procedures. In 1999, the construction of a new tax system based solely on business taxation

(presumptive tax, sales tax and service tax) began. In 2001 and 2002 the tax system is expanding with new types of taxation including: VAT (value added tax) at the rate of 15%; personal income tax (wage tax); profit tax as well as property tax. With these types of taxation the tax base has been expanded, tax burdens reduced and budget revenues increased. In 2005, the tax system reform in Kosovo was applied, so that the pre-tax and wage tax were reduced to personal income tax, and the corporate income tax was replaced with corporate income tax. The tax system in Kosovo now consists of the following types of taxes: Personal income tax; VAT (value added tax); corporate income tax and property tax (Komoni 2008). The Government has continued with the design and implementation of the macro-fiscal framework in compliance with the fiscal rule set out in the Law on Public Financial Management and Accountability (LPFMA). In the framework of the IMF program, taking into account the high structural barriers facing the Economy, the Government of Kosovo has amended the LPFMA to operationalize the investment clause in order to enable investment in infrastructure projects of a development character, funded by international financial organizations. Following the amendment of the LPFMA following the 2012 program with the IMF, general government spending cannot exceed the amount of projected budget revenue and 2% of projected GDP. Thanks to this change, the Government can count on financing public capital investments provided that the Government's accumulated debt - including debt planned for new projects - does not exceed the 30% GDP limit (MTEF 2017 - 2019).

The rest of the paper is structured as follows. The second chapter describes the theoretical aspect of government spending. The empirical results from the theoretical link between government spending and economic growth are presented in Chapter Three. Chapter 4 presents the data, methodology, and interpretation of the results of the data analysis. The conclusions and recommendations are summarized in the last chapter.

2. Theoretical aspect

Economic theory also analyses the budgeting process from the viewpoint of the public option. The analysis is performed with the help of a conceptual and analytical apparatus of the microeconomic theory, namely the theory of public option. The theory of public option is a microeconomic government theory based on the assumption of the individual rationality. (Doru, Camarda, 2010).

In the traditional public finance vision, public spending represents the starting point of the entire economic life. These are granted much importance as the general view is that the state first spends its budget and afterwards determines the necessary income to cover the expenses. On the other hand, there is a lack of attention regarding the nature of these public expenditures and the manner in which they influence the social and economic life. The classical opinion is that establishing a structure for public expenditures is not a financial issue, but one of political choice, with an emphasis on expenditure volume and not content. The state is thus left with handling limited traditional assignments as internal order, national defence, diplomatic relationships or education (Păun, Brezeanu, 2013).

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Many theories focused on the necessity of state intervention in the economy. They indirectly addressed the impact of public spending on economic growth. According to Smith, prices insure the regulation of market economy. And thus, the state intervention could interfere with price adjustment. Therefore, State should avoid intervening in the economy. Generally speaking, classical and neoclassical economists postulate that the pursuit of individual interests leads to general equilibrium, in a situation of competitive equilibrium. Neoclassical theory is an extension of classical economist's theories. Neoclassical economists support the idea that the market allows a stable balance to be achieved. But the interpretation of this concept varies from author to author. Leon Walras examined the conditions of perfect competition. His General Equilibrium Theory is an application of the supply/ demand balance for a good to a national economy. Pareto deepened that idea showing that this equilibrium as an optimum. Any attempt to change the balance could increase the satisfaction of an economic agent and reduce the satisfaction of another agent. However, Hayek, a representative of that school, questioned the classical and neoclassical assumption. For him, market may not lead to the equilibrium. He also highlighted the limitations of Keynesian theory of State intervention in the economy. In fact, he said that state intervention is a hindrance to economic and political liberties of individuals. He also said that state intervention causes disturbance to spontaneous order, what he described as the best form of economic organization, (Kouassi, 2018).

Keynesians see demand as a prerequisite for growth. For this reason, their analysis concludes that aggregate demand management policies can and should be used to improve economic performance. In the Keynesian model, the increase in government spending (Infrastructure) leads to higher economic growth. Despite this view, neoclassical growth models argue that government fiscal policy does not have any effect on the growth of national output. However, it has been argued that government fiscal policy (intervention) helps to remedy the failure that may arise from market inefficiencies (Desmond, Titus, & Timothy C., Odihce, 2012).

Taxation according to a tax benefit theory of taxation cannot at all solve the computational problem in the decentralized manner possible for the first category of "private" goods to which the ordinary market pricing applies and which do have the "external effects" basic to the very notion of collective consumption goods. Of course utopian voting and signalling schemes can be imagined. The failure of market catallactics in no way denies the following truth: given sufficient knowledge the optimal decisions can always be found by scanning over all the attainable states of the world and selecting the one which according to the postulated ethical welfare function is best, (Samuelson, 1954).

Galenson and Leibenstein (1955) proposed that several sets of repercussion effects which had not been considered previously in formal analysis ought to be given an important place in decision models. They stress three effects: first, education of the labor force on the job is considered a benefit of some projects; second, if per capita growth of income is in the objective function, differential effects of projects on population growth should be included in the criteria. Finally, if a government finds it impossible to achieve an optimal level of investment, the capability of projects to generate further capital out of benefits should be considered, and a marginal

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reinvestment coefficient is advanced as a measure. All three of these repercussion effects, it is argued, would favor industrial projects in urban locations as opposed to agricultural or handicraft investments in the countryside. Galenson and Leibenstein do not propose a formal criterion they make their points by illustrative example. Subsequent criticism interprets the reinvestment coefficient as a decision criterion and indicates that it is incorrect or incomplete. But according to Eckstein (1961) this interprets their position, cited in(Eckstein, 1961).

The neoclassical growth model of Solow (1956), or its version in optimal growth formalized by Cass (1965) and Koopmans (1965) following previous evidence in Ramsey (1928), leaves little place for public policy to economic growth interaction. Long-term economic growth is zero (or exogenous), thus government decisions are ineffective in the long-run. Moreover, they at best leave unchanged the short-run growth rate or equilibrium levels of different macroeconomic variables, without any possibility for positive effects. After almost thirty years of stagnation, these topics came alive following the work of Romer (1986), who constructed a model that allows for an endogenous positive long-run economic growth rate. This result generated an optimistic wave, as many studies reopened the question of public policy influence on economic growth. However, results were highly disappointing and not very different from those in exogenous growth models, since government actions were detrimental or neutral to long-run economic growth, cited in (Minea, 2008).

Part of the endogenous growth models assume constant returns on a broad concept of capital. Barro (1990) extend these models to include tax financed government services that affect production or utility. Growth and saving rates fall with an increase in utility-type expenditures; the two rates rise initially with productive government expenditures but subsequently decline. With an income tax, the decentralized choices of growth and saving are "too low," but if the production function is Cobb-Douglas, the optimizing government still satisfies a natural condition for productive efficiency, (Barro, 1990).

Within economics, however, Wagner's hypothesis, which posits a direct relationship between economic development and the size of government activities, offers one longstanding path into the issue. Observing a similar pattern of economic development and government growth amongst industrialising countries in the late nineteenth century, Wagner suggested that the relationship was not accidental, and that there were structural reasons why economic development stimulated the growth of government activity. A problem here however, immediately confronts researchers. Debate over Wagner's Law has produced several interpretations and testing these has in turn produced mixed results. Indeed, in the 1980's and early 1990's, making use of new advances in empirical economics, research into Wagner's hypothesis underwent an exciting new phase of testing. But in the absence of a settled agreement about Wagner's hypothesis, research activity has again reduced, (Magableh).

How does government policy affect growth over several business cycles? Standard models assumed that the economy experiences full employment and full capacity utilization over the long run, implying that fiscal policy has no positive role to play in the long run. According to conventional wisdom, therefore, policy should focus on minimizing the adverse short-term social and economic consequences of business

cycle fluctuations, leaving almost everything else to market forces (Moudud, 1999).

3. The Empirical Aspect

In their study (Oladele, Mah, Mongale, 2017) examined the contribution of government spending towards economic growth in South Africa using annual data from 1980 - 2014. The co integration approach and the VECM model were used to analyse the data. The co integration test results indicate that there is a long-run relationship between variables. The VECM outcome indicates a positive and significant link between economic growth and expenditure on the long run, while VECM results show that there is a negative and significant relationship between government spending and economic growth on the short run, even if the results show the importance of spending in the economy.Chu, Hölscher, McCarthy (2018) examined the relationship between the composition of government spending and economic growth, and separates government expenditure into productive and non-productive forms. To analyse this we used panel data from 37 high-income and 22 low- to middle-income countries covering 1993–2012, findings are based on OLS fixed effects and GMM techniques. Using data from high-income countries, the findings showing that a shift in government expenditure away from non-productive government expenditure and towards productive forms of expenditure are associated with higher levels of growth in both high-income and low- to middle-income economies. Moreover the authors find a similar relationship the results also showed that are most associated with increased long-run output levels in both high-income and low- to middle-income economies.

Iheanacho, (2016) explored the long-run and short-run relationship between public expenditure (recurrent and capital expenditure) and economic growth in Nigeria over the period of 1986-2014, using Johansen cointegration and error correction approach. The result shows recurrent expenditure is the major driver of economic growth in Nigeria. Controlling for the influence of non-oil revenue, this study shows a negative and significant long run relationship between economic growth and recurrent expenditure coexists with a positive short run relationship, highlighting the dual effects of recurrent expenditure on economic growth in Nigeria. For the capital expenditure, this study documents negative and significant long run effect of capital expenditure on economic growth in Nigeria.

The main purpose of Gumus, Mammadov, (2019) were to find out the relation between real government expenditures and real gross domestic product (GDP) for three countries of the South Caucasus namely, Azerbaijan, Armenia, and Georgia using econometric panel techniques. The analysis covers the years 1990 - 2016. The DOLS result according to the authors support two hypotheses the Wagner and Keynes hypotheses for southern Caucasian countries, so there is a mutually positive relationship between real government expenditures and economic growth in the South Caucasus. At the same time, the authors found short and long-term bidirectional causality between government spending and GDP.

Sang Ho, Kwang Ng, (2016) used a quadratic form in the key spending variables to estimate optimal government spending, covering 78 countries from 2005-2009 and

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2010 - 2014, using the Ordered Probit Regression model. The authors found that the average of total public for countries of good public governance, at 36.45% of GDP, is almost identical to the average of estimates of optimal public spending at 36.49%. However, significant over-spending or under-spending is found for individual countries. The authors also found that within the sample of countries with public governance below median, the highest subjective well-being is highest for those with the least public spending, which is around 18% of the GDP.

The purpose of Wang, Peculea, Xu, (2016) were to examine the relationship between public expenditure and economic growth from the perspectives of Keynes and Wagner's law on Romania, ARDL (Auto-Regression Distribution Lag) approach and the Bounds Test based on Unlimited Error Correction Model (UECM) estimation are used. The analysis used annual time series data covering the period 1991 – 2014. Empirical results indicate that there exists a unidirectional long-run relationship from government expenditures to economic growth in Romania, which means the economic growth could affect the government expenditure. In contrast, Keynes's Law does not hold for over the period.

To analyse the impact of government expenditure and efficiency on the economic growth of sub-Saharan African low-income countries, Kimaro, Keong, Sea, (2017) used a panel data of 25 sub-Saharan African low-income countries spanning from 2002 - 2015. The paper executes panel unit root tests by using Im Pesaran-Shin and Fisher ADF tests. The paper also uses Pedroni test to accomplish panel co-integration tests. Finally Generalized Methods of Moments (GMM). The results show that rising government spending accelerated the economic growth of low-income countries in sub-Saharan Africa. The results demonstrate that increasing government expenditure accelerates economic growth of low income countries in Sub Saharan Africa. However, when government expenditure is interacted with government efficiency we found no evidence for government efficiency to boost the impacts of government expenditure on economic growth.

Alrasheedy, Alrazyeg, (2019) studied the nature of the correlation between economic growth and the growthin Saudi Arabia, using recent time- series data over the period 1979 - 2017. The focus of the study was the validity of the five different versions of Wagner's Law as well as the Keynesian approach in Saudi Arabia. The analysis examines the stationary properties, co-integration and Granger causality between government expenditure and economic growth. The autoregressive distributed lag (ARDL) approach of co-integration is utilized to validate the existence of the long-term relationship between the variables. The results confirm the long run validity of three models for both approaches, indicating that government expenditure, government consumption expenditure and government spending as a share of income significantly affect economic growth and vice versa. However, in the short run, we found that the Keynesian approach holds for all five models, whereas there is a violation of one model of Wagner's Law, where no evidence is found for the impact of economic growth on government spending in the short run. The analysis also confirms the feedback hypothesis for all the models except one, which shows a unidirectional hypothesis of causality running from economic growth to government consumption expenditure, and not vice versa.

According to Jiranyakul, Brahmasrene, (2007) causation between government expenditures and economic growth in Thailand was examined using the Granger causality test, from 1993 - 2006.There was no co-integration between government expenditures and economic growth. However, the causality from economic growth to government expenditures was not observed. Furthermore, estimation results from the OLS confirmed the strong positive impact of government spending on economic growth during the period of investigation.

The purpose of Fan, Rao (2003) were to review trends in government expenditures in the developing world, to analyse the causes of change, and to develop an analytical framework for determining the differential impacts of various government expenditures on economic growth. The authors collected data from 1980 - 1998 on 43 developing countries across Asia, Africa and Latin America, using the regression model. The impact of various types of government spending on economic growth was mixed. In Africa, government spending on agriculture and healthwas particularly strong ineconomic growth. Asia's investments in agriculture, education, and defence had positivegrowth-promotingeffects. However, all types of government spending except health were statistically insignificant in Latin America. Structural adjustment programs promoted growth in Asia and Latin America, but not in Africa.

Desmond, Titus, & Timothy C, Odiche, (2012) examined the effect of public expenditure on economic in Nigeria for the period 1970 - 2009.The tool of analysis was the OLS multiple regression model specified on perceived causal relationship between government expenditure and economic growth. Results of the analysis showed that capital and recurrent expenditure on economic services had insignificant negative effect on economic growth. Also, capital expenditure on transfers had insignificant positive effect on growth. But capital and recurrent expenditures on social and community services and recurrent expenditure on transfers had significant positive effect on economic growth.

According to Garry, Rivas Valdivia, (2017) different complementary approaches have been developed to determine the impact of public expenditure on economic growth in Mexico, Central America, and the Dominican Republic. The empirical evidence suggests five main results: i) The contribution of public spending to GDP growth in 2005 - 2014 in most countries is significant. ii) the correlation coefficients show that there is a positive and strong relationship between economic growth and current expenditure in all countries in the sample, but is weak between capital spending and economic growth. iii) co integration tests for economic growth and public expenditure (current and capital) show the existence of a long-term relationship for all countries included in the study. (iv) in terms of multipliers: the cases of Mexico, Costa Rica and Panama stand out, as the sum of multiplier effects in the long-term for these three countries reach values of 2.9, 2.6 and 2.3, respectively. The Dominican Republic and Honduras regiser values of 2.2 and 2.1, respectively. Meanwhile Guatemala and Nicaragua report values of 1.6 and 1.8, respectively. v) the analysis of the impulse-response functions confirms that current expenditure has a significant cumulative effect on economic growth and that capital expenditure has a small and even negative effect on GDP growth in most of the countries of the sub region, with the exception of Costa Rica and Panama.

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To investigate this causality and co-integration relationship between public health expenditure and economic growth in Algeria during 1974 - 2014, Boussalem, Boussalem, and Taiba, (2014) focused on time series co-integration and causality in the VECM framework. The findings revealed that there is a long-run causality from public health expenditure to economic growth, while it is not observed any short-run causality from expenditure health to economic growth. Carter, Craigwell, Lowe, (2013) provided empirical evidence on the relationship between components of government expenditure and economic growth in Barbados. Both the Dynamic OLS and the UECM were employed to analyse time series data spanning from 1976-2011.Generally, the findings suggest that total government spending produces a dragon economic growth, particularly in the short- term, with a much smaller impact over time. More specifically the results indicate that while outlays on health and social security have little influences on per capita economic growth; government expenditure on education typically has a significant and negative impact on growth, both in the long and short runs.

Loizides, Vamvoukas, (2005) sought to examine if the relative size of government (measured as the share of total expenditure in GNP can be determined to Granger cause the rate of economic growth, or if the rate of economic growth can be determined to Granger cause the relative size of government. Using data on Greece, the United Kingdom and Ireland, the analysis shows: i) government size Granger causes economic growth in all countries of the sample in the short run and in the long run for Ireland and the United Kingdom; ii) economic growth Granger causes increases in the relative size of government in Greece, and, when inflation is included, in the UK.

The role of public spending on the education and health sectors has been examined by Maitra, Mukhopadhyay (2012) with regard to promoting the gross domestic product (GDP) of 12 countries in Asia and the Pacific over the last three decades using the ADF test and Unit-root test. In six of these countries, namely Bangladesh, Kiribati, Malaysia, Maldives, Philippines and the Republic of Korea, Johansen co-integration tests confirmed the existence of co-integration relations. In the remaining countries, namely Fiji, Nepal, Singapore, Sri Lanka, Tonga and Vanuatu, co-integration relations were absent. The causal impact of education and health-care spending on GDP was further examined in the study. Education spending was found to have raised GDP in Bangladesh, Fiji, Kiribati, Maldives, Nepal, Singapore, Sri Lanka, Tonga and Vanuatu. On the other hand, health-care spending has contributed to GDP growth in Bangladesh, Nepal, Philippines, Singapore and Sri Lanka. In the Philippines, spending on education had a negative impact on GDP, while in Kiribati, Maldives and Vanuatu, the impact of health-care spending on GDP was found to be negative. In the case of Malaysia and the Republic of Korea, neither education spending nor health-care spending exhibited an appreciable impact on GDP.

4. Data and methodology

The main purpose of this paper is to assess the impact of total government spending on economic growth and development in the Republic of Kosovo. To empirically

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analyse the effect of government spending on the economy, in this empirical analysis we have used the annual secondary data provided by the Ministry of Finance for the period 2008 - 2008. In most empirical research the multiple regression model was used for. To assess the impact of government spending on the economy, therefore we used a multiple regression model to perform the data analysis. Many empirical studies have also analysed the impact of total government spending on the economy, but many other empirical studies have disaggregated the data to analyse the impact of capital expenditures, current expenditures on education, health, agriculture, etc., on the economy. Therefore, in our analysis, in the first baseline model we will investigate the impact of total government spending on the economy, while in the second model we have disaggregated the data by dividing total government spending into current and capital expenditures to see the impact in the economy (Table 1).

viti	Nominal GDP	Total Government Expenditure	Total Capital Expenditure	Current Expenditure	Inflation %
2008	3710746	950525718	347103170	603422548	9.4
2009	4076997	1232339231	400379715	831959516	-2.4
2010	4136474	1271842172	455344289	816497883	3.5
2011	4485994	1387810395	528186137	859624257	7.4
2012	4891000	1466456554	550244689	916211865	2.5
2013	5232860	1500175554	529176312	970999242	1.7
2014	5391751	1498399526	411359601	1087039925	0.4
2015	5795498	1597266001	403851388	1193414613	-0.5
2016	6043370	1749958057	443558818	1306399239	0.3
2017	6297000	1827188514	467521665	1359666849	1.5
2018	66524.2	1970945840	530046003	1440899837	1.1

Table 1. Data on Nominal GDP, Total Government Expenditure, Total Capital Expenditure, Current Expenditure and Inflation (in Millions of Euros)
* Inflation data and nominal GDP for 2018 are obtained from KAS (2019)
Source: Ministry of Finance (2019) and calculation of authors (2019).

The econometric model used in this empirical analysis to estimate the impact of total government spending on economic growth is as follows:

$$\Delta GDP = \beta 1 + \beta 2 \Delta\ GE + \beta 3 \Delta INF + u$$

Where GDP denotes annual GDP at constant prices expressed in millions of Euros, $\beta 1$ is the parameter for intersect, GE denotes the real value of total government spending in millions of Euros, where they are expected to have a negative impact, INFL is the inflation rate obtained from the Annual Average Index of Consumer Prices which expresses the price difference from one year to another (from 2015 = 100), which variable is expected to have a negative impact, and u - is the unexplained portion. The

coefficients of the p -values of the independent variables are significant at 5 percent, to achieve the results related to the effect of government spending on the economy. In the first baseline model GDP was taken as the dependent variable, while GE, and INF were considered as independent variables for the time period from 2008 - 2018.

4.1 The results of the analysis and their interpretation

Table 2 shows the results obtained from the statistical description of the dependent variable, where in our case we have the nominal GDP and the independent variables - Total Government Expenditure, Total Capital Expenditure, Current Expenditure and Inflation for 2008 - 2018, as Mean, Std. Error of Mean, Median, Mode, Std. Deviation Variance, Range, minimum and maximum.

		Total Government Spending	Total Capital Expenditure	Inflation	Nominal GDP	Current Expenditure
N	Valid	11	11	11	11	11
	Missing	3	3	3	3	3
Mean		1495718869.27	460615617.00	2.2636	4557110.38	1035103252.18
Std. Error of Mean		87381864.934	20146842.800	1.03513	516357.263	79533588.857
Median		1498399526.00	455344289.00	1.5000	4891000.00	970999242.00
Mode		950525718[a]	347103170[a]	-2.40[a]	66524[a]	603422548[a]
Std. Deviation		289812859.468	66819518.278	3.43315	1712563.298	263783072.468
Variance		83991493512784416.000	4464848022947000.000	11.787	2932873050210.203	69581509320619944.000
Range		1020420122	203141519	11.80	6230476	837477289
Minimum		950525718	347103170	-2.40	66524	603422548
Maximum		1970945840	550244689	9.40	6297000	1440899837

a. Multiple modes exist. The smallest value is shown

Table 2: Statistical Analysis

Calculation of authors (2019)

4.2. Interpretation of results

To assess the impact of total government spending on economic growth in the Republic of Kosovo for 2008 - 2018, SPSS statistical software was used in this research for data analysis. The results of the analysis (Table 3) showed that the dependent variable (GDP) has a very weak correlation with the independent variables at the level of .234. This implies that the coefficient of determination (R^2) of .055 indicates that only .055 percent of the change in the dependent variable depends on the change of the independent variables. Durbin Watson statistics (DW) is a test for autocorrelation

in the residuals from a statistical regression analysis. Durbin Watson's statistic will always have a value between 0 and 4. A value of 2.0 means there is no autocorrelation detected in the sample. Values from 0 to less than 2 indicate positive autocorrelation and values from 2 to 4 indicate negative autocorrelation. The value of 1.462 from the Durbin Watson test analysis indicates that there is a positive autocorrelation.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.234[a]	.055	-.182	3.71409	.055	.231	2	8	.799	1.462

Table 3: Summary of the econometric mode

a. Predictors: (Constant), Inflation, Government Spending
b. Variable Dependent: Nominal GDP
Calculation of authors (2019)

Also, to validate, if the independent variables have an impact on the dependent variable, we also used the Anova test analysis. Data analysis shows that the differences between the means of the explanatory and non-explanatory variables are not large. So for F = .231 the "p" value for .231 is .799, which means that the results of the

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.375	2	3.187	.231	.799[b]
	Residual	110.356	8	13.794		
	Total	116.730	10			

a. Dependent Variable: Nominal GDP

analysis are not significant.
Table 4: ANOVA test

b. Predictors: (Constant), Inflation, Government Spending
Calculation of authors (2019)

The results of the analysis (Table 5) confirm that total government spending has a negative and insignificant impact on the 5% level of recidivism for the period 2008 - 2018. Data analysis shows that for 1 percent of government spending growth, economic growth drops by - .399. Also, the inflation rate coefficient is negative and non-significant at the 5% level of significance. This means that a 1 percent increase in the inflation rate will affect -257 with the economic downturn.

Table 5: Regression Summary

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	13.291	7.637		1.740	.120	-4.321	30.903
Government Spending	-.399	.776	-.206	-.514	.621	-2.188	1.390
Inflation	-.257	.398	-.258	-.645	.537	-1.175	.661

a.   Dependent Variable: Nominal GDP
Calculation of authors (2019)

The correlation coefficient is a statistical measure that calculates the strength of the relationship between the relative movements of the two variables. A value of exactly 1.0 means that it is a perfect positive relationship between the two variables. For a positive increase in one variable, there is also a positive increase in the second variable. A value of -1.0 means that there is a perfect negative relationship between the two variables. This indicates that the variables move in opposite directions - for a positive increase in one variable, there is a decrease in the second variable. If the correlation between the two variables is 0, there is no relationship between them. The results of the correlation analysis show that nominal GDP has a weak negative correlation with inflation and total government spending. Inflation has a weak negative correlation with nominal GDP while a moderate negative correlation with government spending, while total government spending also has a very weak negative correlation with nominal GDP and moderate negative correlation with inflation.

Table 6: Correlation analysis

		Nominal GDP	Inflation	Government spending
Nominal GDP	Pearson Correlation	1	-.153	-.074
	Sig. (2-tailed)		.654	.828
	N	11	11	11
Inflation	Pearson Correlation	-.153	1	-.512
	Sig. (2-tailed)	.654		.107
	N	11	11	11
Government spending	Pearson Correlation	-.074	-.512	1
	Sig. (2-tailed)	.828	.107	
	N	11	11	11

Calculation of authors (2019)

Annex 1 graphically shows that there is a negative correlation between nominal GDP and total government spending and inflation.

In this research, in addition to the impact of total government spending on economic growth and development, we have also disaggregated total government spending on total capital expenditure and current expenditure to confirm their impact on economic growth. The econometric model for data analysis also used the multiple regression model. Annual data from the Ministry of Finance and authors' calculations also have been used in this model including the period 2008 - 2018.

The econometric model used is as follows:

$$\Delta GDP = \beta 1 + \beta 2\Delta\ TCE + \beta 3\Delta CE + \beta 4\Delta INF + u$$

Also in this dependent variable model is nominal GDP, while the independent variables are: total capital expenditure, government current expenditure and inflation. In Annex 2 we also have the statistical description of the dependent variable and the independent variable.

Table 7: Summary of the econometric model

Calculation of authors (2019)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics						Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change		
.269[a]	.072	-.326	1971734.666	.072	.181	3	7	.906		1.412

...ictors: (Constant), Current Expenditure, Total Capital Expenditure, Inflation
...endent Variable: Nominal GDP

The analysis results from the data analysis showed that the dependent variable (GDP) has a very weak correlation with the independent variables at the level of .269. The coefficient of determination of .072 confirms that only .072 percent of the change in the dependent variable depends on the change in the independent variables. The value of 1.412 from the Durbin Watson test analysis indicates that there is a positive autocorrelation.

The results of analysis by ANOVA test show that the variances between means of explanatory and non-explanatory variables are not large. Thus for F = .181, the "p" value for .181 is .906, indicating that the results of the statistical analysis are non-significant.

Table 8: ANOVA test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2114567356713.438	3	704855785571.146	.181	.906[b]
Residual	27214163145388.598	7	3887737592198.371		
Total	29328730502102.035	10			

a. Dependent Variable: Nominal GDP

b. Predictors: (Constant), Current Expenditure, Total Capital Expenditure, Inflation
Calculation of authors (2019

The regression results show that total capital expenditures and current government expenditures have a negative impact by participating with -.005 and -.001 and are insignificant at the 5% level of significance during the period 2008 - 2018. Also, inflation is negative and insignificant at the 5% level of significance.

Table 9: Regression Summary

a.   Dependent Variable: Nominal GDP
Calculation of authors (2019)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	7569255.922	4753759.537		1.592	.155	-3671599.165	18810111.008
1 Total Capital Expenditure	-.005	.010	-.183	-.472	.651	-.028	.019
Inflation	-102690.982	223711.182	-.206	-.459	.660	-631683.867	426301.903
Current Expenditure	-.001	.003	-.093	-.199	.848	-.008	.007

Annex 3 shows the results of the correlation analysis, where GDP has a weak negative correlation with inflation, total capital expenditure and government current expenditure. While inflation has a weak negative correlation with nominal GDP and total capital expenditure, inflation also has a moderate negative correlation with current government spending. Total capital expenditure by the Government has a weak negative correlation with nominal GDP and inflation, but a very weak positive correlation (.282) with current expenditure. Also, government current expenditure has a weak negative correlation with nominal GDP and a moderate negative correlation with inflation, but current expenditure has a positive correlation with total government capital expenditure, but this correlation is very weak (.282). .In Annex 4 we graphically show that there is a weak negative correlation between nominal GDP and total capital expenditure, government current expenditure and inflation. Also in Annexes 5, 6, 7, 8 we present the scatter plot for each variable separately.

Conclusions and recommendations

The purpose of this paper was to investigate the impact of total public expenditure on economic growth in the Republic of Kosovo, using annual secondary data from 2008 - 2018. Model data were analysed using multiple regression model. The regression results showed that total government spending has a negative and insignificant impact on economic growth at 5% of significance from 2008 to 2018. Also, the inflation

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rate coefficient is negative and insignificant at 5% of significance. The results of the correlation analysis show that nominal GDP has a negative correlation with inflation and total government spending. In addition to aggregate public spending data, in this study we have also disaggregated them by dividing total public expenditure into current and total capital expenditure to see their effect on the economy. The regression results show that total capital expenditures and government current expenditures have a negative impact by participating with -.005 and -.001 and are non-significant at the 5% level of significance over the period 2008 - 2018. The results of the correlation analysis show that GDP has a weak negative correlation with inflation, total capital expenditure and government current expenditure, while total capital expenditure by the Government has a weak negative correlation with nominal GDP and inflation, but a very weak positive correlation (.282) with running costs.

According to theoretical literature, there is no strong link between government spending and growth and economic development. The empirical literature on total public expenditure, capital expenditure and current expenditure shows mixed results in both developed and developing countries. While in low-income countries, most empirical research points to a negative effect of public spending on the economy. Therefore, the results of our research are consistent with these studies.

Due to the negative impact of current expenditures and capital expenditures in the country, policy-makers need to design and implement more appropriate allocative, redistributive and stabilizing policies in order to promote economic development and increase social welfare. For public spending to have a greater effect on the economy, it must be used productively and cost-effectively, and policy-makers should be directed to economic development through multiplication. This research helps policy-makers in which direction government policy should be oriented in terms of government spending, thus having to analyse and determine the role of current and capital expenditure. Findings in the empirical literature show that spending on education and health aids economic development. Therefore, even in the Republic of Kosovo, government spending should be more oriented towards spending on education, health and subsidizing in agriculture, as the agricultural sector is one of the main catalysts for economic development.

Future research at the country level should focus on the impact of public spending on various sectors, especially on the health, education and agricultural sectors. Also, various variables need to be expanded, such as private consumption, import and export, investment, and unemployment. Because empirical research on the impact of public spending on the economy is lacking in the country, the Granger's Test should also be used in future studies.

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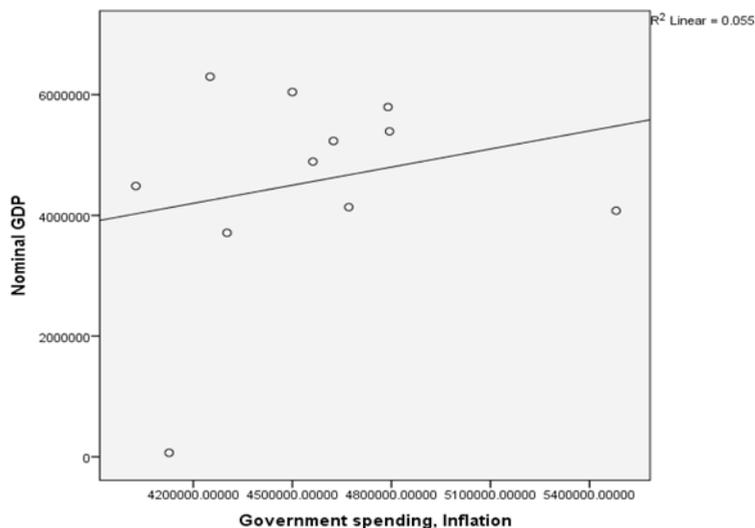
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Appendix

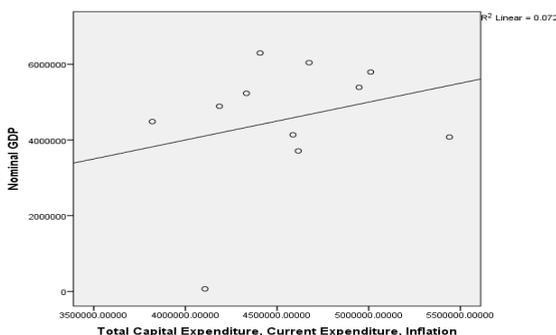Annex 1: SCATTERPLOT: Nominal GDP, Total Government Spending and Inflation

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Annex 2: Statistical Analysis

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Total Government Spending	11	10204201 22	950525718	19709458 40	1495718869. 27	87381864.93 4	289812859.4 68	83991493512784416. 000
Total Capital Expenditure	11	20314151 9	347103170	55024468 9	460615617.0 0	20146842.80 0	66819518.27 8	4464848022947000.0 00
Inflation	11	11.80	-2.40	9.40	2.2636	1.03513	3.43315	11.787
Nominal GDP	11	6230476	66524	6297000	4557110.38	516357.263	1712563.298	2932873050210.204
Current Expenditure	11	83747728 9	603422548	14408998 37	1035103252. 18	79533588.85 7	263783072.4 68	69581509320619944. 000
Valid N	11							

Annex 3: Correlation Analysis

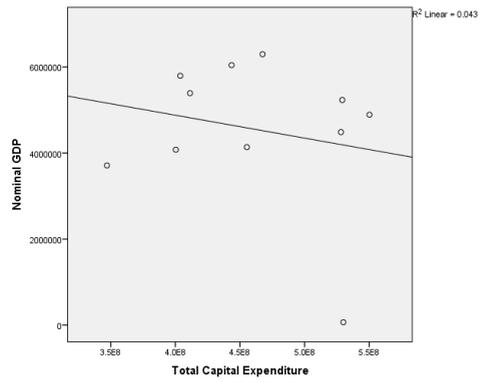|		Nominal GDP	Inflation	Total Capital Expenditure	Current Expenditure
Nominal GDP	Pearson Correlation	1	-.153	-.208	-.029
	Sig. (2-tailed)		.654	.540	.933
	N	11	11	11	11
Inflation	Pearson Correlation	-.153	1	-.004	-.561
	Sig. (2-tailed)	.654		.990	.072
	N	11	11	11	11
Total Capital Expenditure	Pearson Correlation	-.208	-.004	1	.282
	Sig. (2-tailed)	.540	.990		.401
	N	11	11	11	11
Current Expenditure	Pearson Correlation	-.029	-.561	.282	1
	Sig. (2-tailed)	.933	.072	.401	
	N	11	11	11	11

Annex 4: SCATTERPLOT: Nominal GDP and Total Capital Expenditure, Current Expenditure, Inflation

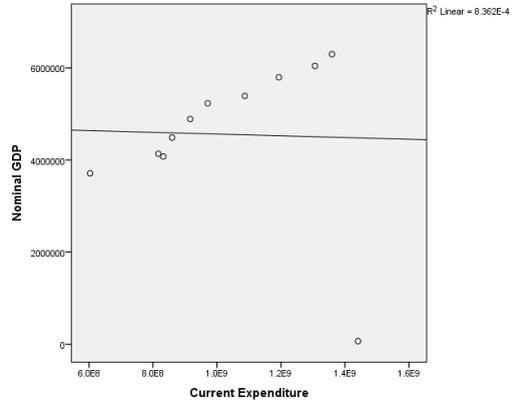## Scatterplot for each individual variable

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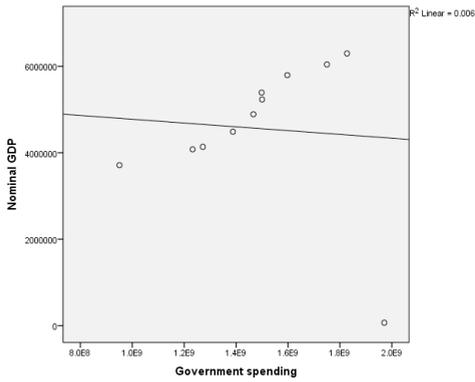
Annex 5: Nominal GDP and Total Government Spending

Annex 6: Nominal GDP and Total Capital Expenditure
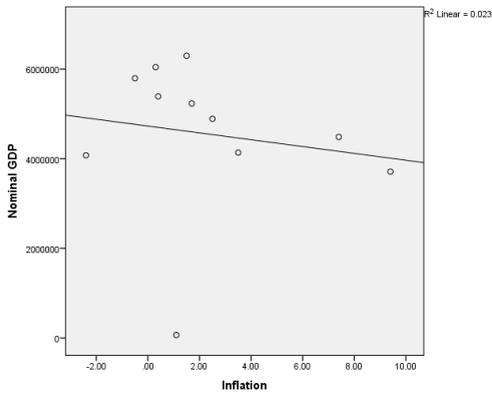
Annex 7: Nominal GDP and Inflation

Annex 8: Nominal GDP and Current Expenditure