The Impact of Public Expenditure on Economic Growth of Kosovo

Driton Balaj[1], Lirim Lani[2]

Abstract: The aim of the paper is to identify the impact of public expenditure on economic growth of Kosovo over the period 2000-2016. The structure of the econometric model is built by two economic theories, Wagner and Keynesian, where these two economic concepts support the results of the paper, that public expenditure and economic growth have a positive relation, but public expenditure does not have a direct impact on economic growth, but can have a stimulate effect on the economic growth process. The results of the econometric model showed that none of the public expenditure categories in Kosovo had any impact on economic growth of Kosovo over the period 2000-2016. The general conclusion is that public expenditure in Kosovo has been characterized by an unproductive public expedition, for the period 2000-2016, the effect of public expenditure on economic growth has not had the necessary and reasonable impact on achieving the economic target in Kosovo. The findings of the paper can be used by Kosovo's own government to orient the fiscal policies in Kosovo. The study seeks to contribute to the provision of an effective public expenditure structure in Kosovo, with particular emphasis on the best categorization of their impact on Kosovo's economic growth.

Keywords: Efficient public expenditure; Economic Growth; Education; Health; Economic Issues

JEL Classification: H50; E62; O47

1. Introduction

From a historical perspective, the relationship between public expenditure and economic growth has created a broad discussion within economic literature. Discussions mainly include the role of government in economic development and how this role can be accomplished in the most efficient way. The relationship between public expenditure and economic growth is one of the most discussed topics in public finance. The public expenditure is seen to increase productivity, but in the same breath is seen as an obstacle to development due to its funding.

[1] Assistant Professor PhD, University of Prishtina, Faculty of Economics, Republic of Kosovo, Address: 60 Agim Ramadani Str., Prishtina, Republic of Kosovo, Tel: +386-44-505-509, Corresponding author: driton.balaj@uni-pr.edu.

[2] Assistant, College Dukagjini, Faculty of Economics, Republic of Kosovo, Address: n.n. Wesley Clark Str., Pejë, Republic of Kosovo, Tel: +386 49 616 202, E-mail: lirimlani@dukagjinicollege.eu.

Borrowing to finance public expenditure, the government competes with private equity investors by reducing private investment and pushing the huge burden of external debt. Representatives of neoclassical public expenditure theories emphasize that the government's role in the economy should be least involved in the economy. Representatives of neoclassical public expenditure theories emphasize that the government's role in the economy should be least involved in the economy. The public finances can affect economic growth in many ways. However, according to the theoretical literature it is possible to highlight some key ways in which public funding affects economic growth, institutional framework (the correct determination of laws and regulations), the tax system and public expenditure (mainly basic expenses or essential, both for justice, education, health, public infrastructure, etc.). The impact of public expenditure on economic growth by most researchers has no direct effect on economic growth, but its impact on economic growth may be a stimulus to economic growth through productive public expenditure. The connection between public expenditure and economic growth is one of the most tackled topics in modern times in public finances. The Law's Wagner "law of the expanding state role", written more than a century, continues to attract the attention of many studies of this area and the budget policymakers. According to this law, there is a relationship between public spending and economic growth. Although this law points to this connection, it is empirically difficult to treat and study, whereas in modern times many empirical studies explain economic growth and public expenditure.

The last changes in fiscal policy have led many researchers to tackle the relationship between economic growth and public expenditure. More than two or three decades ago, many researchers have been involved in identifying the types of public expenditure that are affecting the growth of the gross domestic product (GDP). Most of the major conclusions for large sample developed and developed countries, which is a difficult process to understand how public expenditure can stimulate the growth of the economy.

2. Literature Overview

The review of the literature on the topic is divided into two perspectives, the side that public expenditure sees only as a structure for the fulfilment of state obligations towards citizens, rather than as factors influencing economic growth and the other side that public expenditure considers as factors influencing some of the empirical predetermined measures.

Government spending can also be divided into spending that will have a long-term impact on growth and therefore poverty reduction and that with shortrun effects. The first type is designed to build human and physical capital that will have a long-term impact on economic growth, and therefore income, income distribution, and

poverty. This typically includes infrastructure, education, and technology. This type of investment can also contribute to poverty reduction in the short run through increased demand for intermediate inputs, labor, and other factors of production. The second type is spending for social safety nets or welfare spending that often has an immediate impact on income and poverty through direct income (or in-kind) transfers. But the latter could also have a long-term impact if the transfer is conditioned on households' or communities' building human and physical capital. The social indicators such as improved health and education can also be regarded as direct outcomes of these types of spending, as mentioned in the previous section. Because the majority of the world poor are concentrated in rural areas, we pay particular attention to how public spending affects the rural poor (Coady and Fan, 2008, p.10).

The average rates of growth of public expenditure in the 1970s, which were phenomenal, exceeded the growth rates of GDP, 41.9% compared with 35.6%. The ratio of public spending to GDP, consequently, showed a steady increasing trend during this period in all countries except Oman, averaging 42% in the 1970s and 46.7% in the 1980s. On the other side, the ratio of income to GDP, which had an initial increase of 50% in the 1970s due to two major oil price adjustments, showed a downward trend mainly due to the change in the composition of GDP with an increase in the weight of the component relatively inexpensive tax on GDP (Al-Faris, 2002, p.1188). The correlation between rising government spending on GDP and economic growth was found to be positive in Asian countries, but negative in OECD countries, Africa and America. Using data from 43 developing countries during the 1970s 1990s, an increase in the share of current expenditures has a positive and statistically significant effect on economic growth (Vu Le and Suruga, 2005). According to Ventelou and Xavier (2006) summarizes the outcome, as Aschauer has already shown (or assumed in the Barro model), public expenditure modifies the potential for macroeconomic growth, and therefore there is no reason to limit the size of the state to public expenditure. Put another way, public expenditure is not a problem, the way they can be used is a problem. According to Bose et al. (2003), tax revenues have a negative (not always significant) impact, while the government deficit growth has a very significant negative effect, the increase in additional funding will moderate the positive effects on education or capital expenditures.

According to Musgrave Rostow's theory, public expenditure on the economy should be encouraged. The theory further emphasizes during the early stages of growth there are market failures and thus there must be strong government involvement to deal with these market failures. This theory is blamed for ignoring its contribution to private sector development, assuming government expenditure is the only driver of economic growth (Muthui et al., 2013).

Among the pioneering literature on public expenditure was an associate with a German economist named Wagner. The literature suggests that the increase in public expenditure was a natural consequence of economic growth. Specifically, Wagner's law saw public expenditure as a behavioural variable that responds positively to the dictates of a growing economy. The hypothesis seeks to find either a positive relationship between government expenditure and income and/or a unidirectional causality stemming from government expenditure towards economic growth. Wagner's law is admired because it tries in many ways to explain public expenditure and economic growth. The law is blamed because of its inherent assumption of state view as a separate entity capable of making its own decisions by ignoring the population of the ingredient that can actually rule against the dictate of Wagner law (Muthui and others, 2013, p.240). According to Yilgör et al. (2012), empirical findings may reveal that current spending, transfer costs, and total spending relate to the growth of Turkey's economy. These findings suggest that in order to ensure growth in Turkey's economy, controlled increases should be made in public expenditure forms. Regression analysis shows that some of RS 's spending does not appear to be influential in its economic growth, despite being disclosed in the literature. Investments, for example, have shown that they do not have an impact on economic growth, as does education. This may indicate that such expenditures are not being developed effectively, perhaps due to elaboration or policy definition problems undertaken in these areas or difficulties in implementing proposed programs and projects (Busatto, 2011). According to Campodónico et al. (2014), the simulation results is that in the long run the prioritization of investment in education and health infrastructure investment generates economic growth and reduces unemployment, poverty and inequality. This conclusion applies both to the public and private sectors. However, the optimum mixture of the more investing in education and health and the less on infrastructure depends on the initial conditions of the stock of education, health and infrastructure capital. According to Oyinlola and Akinnibosun (2013), the change in national incomes may cause changes in government expenditure, as the government's magnitude in Nigeria has increased both in absolute terms and in relative terms. However, the presence of a cointegrating relationship between variables in the system suggests that there is a long-term relationship between them.

3. Methodology and Data

The main purpose of the paper is to build the elements of public expenditure, that have an impact on economic growth in Kosovo. The paper is based over the period 2000-2016. Data is an annual time series, where the main econometric test to be used is the OLS model. The paper uses secondary source for the period 2000-2016.

The data are processed from the annual budget reports of the Republic of Kosovo and other scientific sources so that the data is credible. The main limitation of data is that they are in annual time series, rather than quarterly time series. The use of secondary data with annual time series has determined that the best econometric method is the OLS model. Except for this type of econometric work, all central statistical or descriptive analyzes of all the variables used in the econometric model, the correlation between the variables, the F-test of the econometric model, and the accuracy and stability of the econometric model will be addressed.

The theoretical framework based on two economic's law, Wagner and Keynesian theory, according to Keynesian theory public expenditures determine the economic growth of a country, while the second theory supports the connection between public expenditure and economic growth, but all public expenditure has an impact on economic growth of a country.

$$gpk = f\ (GEPGDPt)$$

According to the Keynesian model, economic growth is a function of public expenditure components.

$$gpk = f\ (GEPGDPt)$$

Total public expenditures as a function of the sum of all public expenditure components.

$$GEPGDPt = f\ (public\ expenditures\ of\ all\ categories)$$

4. Hypothesis

The hypotheses of the paper are:

H_0 - Public expenditures on education do not have statistically significant impact on economic growth of Kosovo;

H_1 - Public expenditures on education have statistically significant impact on economic growth of Kosovo;

H_0 - Public expenditures on order and public safety do not have statistically significant impact on economic growth of Kosovo;

H_1 - Public expenditures on order and public safety have statistically significant impact on economic growth of Kosovo;

H_0 - General public expenditures do not have statistically significant impact on economic growth of Kosovo;

H_1- General public expenditures have statistically significant impact on economic growth of Kosovo;

H_0 - Public expenditures on health do not have statistically significant impact on economic growth of Kosovo;

H_1 - Public expenditures on health have statistically significant impact on economic growth of Kosovo;

H_0 - Public expenditures on economic issues do not have statistically significant impact on economic growth of Kosovo;

H_1 - Public expenditures on economic issues have statistically significant impact on economic growth of Kosovo;

5. Empirical Model

Public expenditures in the paper have been modified and adapted to the public expenditure framework in Kosovo and to the supporting theory of the work. Within GEPGDP we have included these public expenditures: general services, protection, order and public safety, economic issues, protection and environment, housing and community, health, recreation, culture and religion, education and social protection.

The econometric model of the paper is:

$$gGDP_t = C + \beta_1 GS_t + \beta_2 P_t + \beta_3 OPS_t + \beta_4 E_t + \beta_5 EP_t + \beta_6 HC_t + \beta_7 H_t + \beta_8 RCR_t + \beta_9 E_t + \beta_{10} SP_t + \varepsilon$$

Where;

GGDP - economic growth;

GS - General Services;

P - Protection;

OPS - Order and public security;

E - Economic Issues;

EP - Environmental protection;

HC - Housing and communities;

H - Health;

RCR - Recreation, culture and religion;

E - Education;

SP - Social Protection;

C - Constants for variables

E - Random error for period t

T - 2000 to 2016

Economic growth will be calculated as a percentage of economic growth, while all categories of public expenditure will be calculated in relation to the total public expenditure expressed in percentage.

General Expenditure - Within general expenditures are mainly expenditures for Legislative and executive bodies, ministers and various administrative departments serving the citizens. The value of total expenditures varies, depending on the structure of executive bodies and various departments established in Kosovo's governments, this type of expenditure is mainly for the purposes of meeting the constitutional needs of the legislative and executive bodies in Kosovo.

Defence - the expenditures related to Kosovo's defence forces are included. This segment includes military, civil defense, international military assistance and other relevant expenditures in this area.

Order and public security - Expenditures on order and public security include institutions related to internal public security such as the Ministry of Internal Affairs and police services. These expenditures relate to the safety of public security in the country.

Economic Issues - public expenditure on economic issues includes direct public expenditure on economy and infrastructure, energy, public transport, mining, trade and agriculture. This type of public expenditure is the most important economic structure that has a positive impact on economic growth.

Environmental protection - this type of public expenditure in Kosovo has not taken the right place in the structure of public expenditure, as its participation in the Kosovo budget for the period 2000-2016 is rather small, more modest.

Housing and communities - in the category of expenditures for housing and communities are included the expenses for the regulation and maintenance of water supply, lighting of roads, then for housing and accommodation of communities and other.

Health - the most vital and important sector for health care in a country is healthy, unfortunately, in Kosovo, the investment trend in health is not enough for their real needs.

Recreation, culture and religion - in this sector are included services of culture, entertainment or recreation and sports, religious services, publication services, broadcasting etc.

Education - the main sector and foundation of a sustainable economic and social development of a country is education, within these expenditures, there are

expenditures for the low level of education, secondary education and higher education level.

Social Protection - the Department dealing with social problems in the Republic of Kosovo is the Ministry of Labor and Social Welfare, which administers social assistance programs that facilitate poverty alleviation, among which is the pension system. This system includes pensions available to all residents over 65, early retirement scheme, disabled persons and war invalids, as well as social assistance schemes for support for poor families.

6. Result and the Interpretation of the Empirical Analysis

Table 1 presents descriptive analysis of all types of public expenditure in Kosovo, discussed above, where each expenditure has every central statistical analysis. General services have a minimum value of € 36 million, while the maximum amount of € 337 million for the period 2000-2016, the average total expenditure is € 185.02 million. The defence and public order have the average cost of € 22.83 million, or € 83.25 million, with a normal standard deviation rate. The economic issue has an average of public expenditure in Kosovo € 140 million, while for environmental protection € 861 thousand. Health and Recreation, Culture and Religion averaged € 94.82 million, respectively € 16.37 million, while social protection € 21.91 million. Economic growth in Kosovo has a minimum threshold of -70%, while economic growth of Kosove has average rate for the 17 year period 1.47%.

Table 1. Descriptive Analysis of Public Expenditure in Kosovo

	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
General_Expenditure	17	300.60	36.00	336.60	185.0739	24.96987	102.95339	10599.401
Defence	17	41.65	6.01	47.66	22.8276	2.76333	11.39352	129.812
Order_and_public_security	17	133.16	21.75	154.91	83.1630	8.54529	35.23313	1241.374
Economic_Issues	17	395.80	34.40	430.20	227.6314	32.72697	134.93677	18207.931
Environmental_protection	17	11.74	.18	11.92	3.0412	.86830	3.58010	12.817
Housing_communities	17	38.72	2.99	41.71	21.3980	2.95350	12.17759	148.294
Health	17	145.17	27.61	172.78	94.8145	11.00324	45.36751	2058.211
Recreation_culture_religion	17	30.68	3.55	34.23	16.3946	2.71388	11.18962	125.208
Social_Protection	17	333.00	30.44	363.44	156.8270	21.92044	90.38030	8168.599
Education	17	243.17	30.84	274.01	140.2176	18.65575	76.91963	5916.629
GDP	17	.2768	-.0070	.2697	.047992	.0147134	.0606651	.004

To elucidate the data of the econometric model, we used the SPSS statistical program. While R^2 in our analysis is .614, which indicates that 61.4% of the dependent variables are explained by independent variables. In our analysis for verification of model stability, serial correlation was used. The Durbin-Watson correlation value may be in the range of 0 to 4. If the Durbin-Watson value is approximately zero, then the serial correlation shows that the data in the model has a high positive impact between the residual value. If the DurbinWatson correlation is offered a value of four (4), it indicates that the data have a negative serial correlation. The model can be considered stable when the Durbin-Watson results are close to the value range of two (2). The Durbin-Watson test is considered to have no serial correlation within the range of 1.5 to 2.5, indicating that the residual value has no serial correlation or there is no autocorrelation between the residual value. Therefore, based on this interval, the findings in our study show that Durbin-Watson is in the value of 2,430, which is within the interval value, and this results in the model being stable.

Tabel 2. Model summary

Model Summary[b]

Model	R	R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
1	.561[a]	.614	.08812832	.314	.229	10	5	.977	2.430

a. Predictors: (Constant), General_Expenditure, Defence, Order_and_public_security, Economic_Issues, Environmental_protection, Health, Recreation_culture_religion, Housing_communities , Education, Social_Protection

b. Dependent Variable: GDP

F-test equals .007 indicates that all coefficients together are statistically signified and different from zero.

Tabel 3. ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.018	10	.002	.229	.007[b]
	Residual	.039	5	.008		
	Total	.057	15			

a. Dependent Variable: GDP

b. Predictors: (Constant), General_Expenditure, Defence, Order_and_public_security, Economic_Issues, Environmental_protection, Health, Recreation_culture_religion, Housing_communities , Education, Social_Protection

Tabel 4. Coefficients of econometric model

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.503	2.870		-.175	.868			
	Health	1.635	6.161	.439	.265	.801	.440	.118	.098
	General_Expenditure	.190	1.418	.321	.134	.898	-.148	.060	.050
	Defence	-1.291	22.192	-.089	-.058	.956	.273	-.026	-.022
	Order_and_public_security	.625	2.921	.219	.214	.839	.226	.095	.079
	Economic_Issues	.416	2.794	.348	.149	.888	-.304	.066	.055
	Environmental_protection	.444	39.762	.014	.011	.992	-.217	.005	.004
	Housing_communities	1.052	18.780	.098	.056	.957	-.299	.025	.021
	Recreation_culture_religion	-1.381	9.529	-.093	-.145	.890	-.053	-.065	-.054
	Education	1.878	9.283	.877	.202	.848	.304	.090	.075
	Social_Protection	-.359	3.657	-.148	-.098	.926	-.069	-.044	-.036
a. Dependent Variable: GDP									

The results of the econometric model specify that none of the public expenditure incurred in the model has affected Kosovo's economic growth for the period 2000-2016.

The equation of the econometric model is:

$$gGDP_t = -0.503 + 0.190GE_t - 1.291D_t + 0.625OPS_t + 0.416E_t + 0.444EP_t + 1.052HC_t + 1.635H_t - 1.381RCR_t + 1.878E_t - 0.359SP_t + \varepsilon$$

The interpretation of this econometric equation is:

1) Constant -0.503 is considered as the intercept, which shows the average rate of GDP when other public expenditures are 0;
2) General expenditures have a positive sign, so with the increase of total expenditures by 1%, there will be GDP growth of 0.190 percentage points. The significance level 0.898 reject H1 hypothesis, while approving the hypothesis H0;
3) Defence is negative, so with the increase of public expenditure on defence by 1% we will have a decrease of GDP of 1.291 percentage points;
4) Order and public security have a positive sign, so with the increase of public expenditure on order and public security for 1% we will have GDP growth of 0.625 percentage points. The significance level of 0.839 reject the H1 hypothesis, while approving the hypothesis H0;

5) Economic issues have a positive sign, with growth in economic spending by 1%, GDP growth will be 0.416 percentage points. The significance level 0.888 refuses H1 hypothesis, while approving the hypothesis H0;
6) Environmental protection has a positive sign in the model, when increasing public expenditures for environmental protection by 1% will have GDP growth of 0.444 percentage points;
7) Housing and communities have a positive sign, so with the increase of housing expenditures and the community for 1% we will have a GDP growth of 1,052 percentage points;
8) Health has a positive sign, so with the increase of health expenditure by 1% we will have GDP growth of 1.635 percentage points. The significance level 0.801 refuses H1 hypothesis, while approving the hypothesis H0;
9) Recreation, culture and religion have a negative sign, with the increase of public expenditure on recreation, culture and religion for 1% we will have a decrease of GDP of 1.381 percentage points;
10) Education has a positive sign, so with the increase in education expenditure by 1% we will have GDP growth of 1.878 percentage points. The significance level of 0.848 reject the H1 hypothesis, while approving the hypothesis H0;
11) Social protection has a negative sign, with the increase of public expenditure on social protection by 1% we will have a decrease of GDP of 0.359 points 5;

7. Conclusion

The connection between public expenditure and economic growth is one of the most discussed topics in the Public Finance. Public expenditure is seen to increase productivity, but in the same breath is seen as an obstacle to development due to its funding. The structure of public expenditure in Kosovo shows that investments in various public segments are insufficient for a normal economic and social development in Kosovo. The main purpose of the paper is to identify the impact of public expenditure on economic growth and the interaction of these two economic concepts through the use of the econometric model for the purpose of efficient and credible analysis in support of economic assumptions. The connection between public expenditure and economic growth has traditionally had an inverse relationship, since some of the public expenditure does not have a direct impact on the economic growth of a country, especially in developing countries, in our case in Kosovo where public expenditure is oriented unproductive public expenditure. The paper included 10 types of public expenditure categories, which include a large part of them, which have a predominant structure in Kosovo. The share of the main public expenditure in Kosovo shows that participation in GDP is very small compared to the countries in the region, an indication that this element has not had direct effects on Kosovo's economic growth. The working hypotheses have proved that none of the public expenditure has a significant impact on economic growth in

Kosovo. The overall conclusion of the paper is that all public expenditures dealt with in the econometric model do not have an impact on economic growth of Kosovo, so public expenditure for the period 2000-2016 has had unproductive characteristics that did not have a direct effect on economic growth of Kosovo, but only the effect of internal consumption for non-economic purposes.

8. References

Al- Faris, A.F. (2002). Public expenditure and economic growth in the Gulf Cooperation Council countries. *Applied Economics*, 34:9, 1187-1193.

Manh, Vu Le & Terukazu, Suruga (2005). Foreign direct investment, public expenditure and economic growth: the empirical evidence for the period 1970–2001. *Applied Economics Letters*, 12:1, 45-49.

Ventelou, B. & dhe Bry, X. (2006). The role of public spending in economic growth: Envelopment methods, *Journal of Policy Modeling* 28, 403-413.

Bose, N, Haque, E.M. & dhe Osborn, R.D. (2003). *Public Expenditure and Economic Growth: A Disaggregated Analysis for Developing Countries*.

Muthui, N. J., Kosimbei, G.; Maingi, J., dhe Thuku, K.G. (2013). The Impact of Public Expenditure Components on Economic Growth in Kenya 1964-2011. *International Journal of Business and Social Science*, vol.4, no. 4.

Yilgör, M., Ertugrul, C. & Celepcioglu, E. K. (2012), The effect of public expenditure on economic growth: Turkey example, Investment Management and Financial Innovations, vol 9:2;

Busatto, M. (2011). *The quality of public expenditure and its influence on economic growth: evidences from the State of Rio Grande do Sul (RS)*. Minerva Program, The George Washington University;

Campodonico, F.J., Cassinelli, R. J. & dhe Mesones, J. (2014). The Impact of Public Expenditures in Education. *Health, and Infrastructure on Economic Growth and Income Distribution in Peru*, IDP, No. IDB-WP-490;

Egbetunde, T. & dhe Fasanya, O.I. (2013). Public Expenditure and Economic Growth in Nigeria: Evidence from Auto-Regressive Distributed Lag Specification. *Zagreb International Review of Economics & Business*, Vol. 16, No. 1, 79-92.

Oyinlola, A.M. & dhe Akinnibosun, O. (2013), Public expenditure and economic growth nexus: Further evidence from Nigeria. *Academic Journal*, Vol 5(4), 146-154.

(2008). Group of Authors, *Public Expenditure, Growth, and Poverty*, IFPRI, The Johns Hopkins University Press.