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THE IMPACT OF PUBLIC EXPENDITURE ON ECONOMIC GROWTH: A REVIEW OF INTERNATIONAL LITERATURE

Sheilla Nyasha[1] and Nicholas M. Odhiambo

Abstract

In this paper, theoretical and empirical literature on the relationship between government expenditure and economic growth has been reviewed in detail. Specific focus was placed on the review of literature that assessed the impact of government spending on economic growth. The literature reviewed has shown that the impact of government spending on economic growth is not clear cut. It varied from positive to negative; with some studies even finding no impact. The study identified a number of factors that could be driving this inconsistency in conclusions by various studies on the same topic. Differences in the study samples, study periods, methodologies employed and the proxies for government expenditure have been the key causes of varying results and conclusions on the nature of the impact of government spending on economic growth. This study has also revealed that as economists get desperate in concluding the government expenditure-economic growth debate, they are increasingly disaggregating the government expenditure into various components and test the impact of each component on economic growth. The practice has, however, not been able to move the debate closer to its conclusion, as the results from such practice are also widely varying. Although the impact of government spending on economic growth was found to be inconclusive, the scale tilts towards a positive impact.

Key Words: Public Expenditure, Government Expenditure, Government Size, Economic Growth, Impact

Article Classification: Literature Review

1. Introduction

The relationship between government spending and economic growth has attracted widespread attention over the years as economists and politicians battle to establish the impact of government spending on economic growth. The outcome of their work has been more confusing than it has been helpful, because of the lack of consensus on the results and conclusions reached.

From the theoretical perspectives, there are the Keynesians that advocate for the positive impact of government spending on economic growth; and the Classicals and the

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Neoclassicals that postulate that government spending has a negative impact on economic growth (Romer, 1986; Lowenberg, 1990). There are also those that found a middle ground where government spending is postulated to have a positive impact on economic growth up to a certain optimal threshold, above which the impact of government spending on economic growth turns negative (Barro, 1989; Friedman, 1997).

Even on an empirical front, the possible impact of government spending on economic growth has been varied as well. Some studies have found the impact to be positive (Yasin, 2000; Attari and Javed, 2013; Kimaro *et al*., 2017) while others have found a negative impact (Devarajan *et al*., 1996; Nurudeen and Usman, 2010; Sáez *et al*., 2017). There are also some studies that concluded that government spending has no significant impact on economic growth (see Schaltegger and Torgler, 2006; Hasnul, 2015).

With government spending still on the rise in many economies, on the one hand, and declining economic growth rates in these economies, on the other hand, the debate on whether government spending has a positive, negative or neutral impact on economic growth is still raging today – with some studies going an extra mile disaggregating government expenditure into various components. Still, the outcome has been largely inconclusive.

Against this background, the objective of this study is to review empirical literature available to date on the impact of government spending on economic growth. The rest of the paper is organised as follows: the second section dwells on the theoretical literature review while the third section reviews the empirical literature on the impact of government expenditure on economic growth. The fourth section concludes the paper.

2. The Impact of Public Expenditure on Economic Growth: Theoretical Literature Review

Although the relationship between government expenditure and economic growth has attracted the attention of economists, policy makers and politicians over the years, the debate is still raging. The bone of contention is whether the impact of government size on economic growth is positive, negative or insignificant. Different schools of thought have different conclusions on this contentious topic.

According to the Keynesian theory, government spending has a positive impact on economic growth. The Keynesian theory postulates that the more the government spends, the higher the economic growth as a result of expansionary fiscal policy (Romer, 1986). The premise is that as the government spending trends up, production will follow suit, leading to aggregate demand stimulation, and therefore, increased levels of GDP. Private investment is another channel through which government spending can exert positive effects on economic growth. According to Ram (1986) and Ghali (1998), increasing government expenditure encourages private investment, which will translate to higher economic growth.

On the extreme end of the theorists' continuum are the Classicals, the Neoclassicals and the public choice theorists, who claim that government expenditure is bad for economic growth as a result of the crowding-out effect – as the spending by the government displaces critical investments by the private sector due to resource constraints. Hence, the relationship between the two is negative (Lowenberg, 1990). It is the viewpoint of public choice theorists that as the government size increases, and given the distortionary effects of taxation, government levels of inefficiencies are bound to increase, hence government spending is bound to reduce economic growth.

Besides the theorists at the extreme ends of the continuum are those in the middle, who have found a middle ground – and settled on the view that the relationship between government spending and economic growth is non-linear; and has an optimal point below which government spending has a positive impact on economic growth and above which it has a

negative impact on economic growth (Barro, 1989). The middle ground view posits that the role of government in a free and open society is vital; and that government expenditure contributes positively to economic growth. However, Friedman (1997) acknowledges that as the government spending increases from the optimal level of 15% of national income to 50%, the impact of public expenditure on economic growth tends to be negative.

Still on the middle ground, Ram (1986) found a compromise between the Keynesian theory and the public choice theory based on expenditure types. According to Ram (1986), expenditure on the core areas of government has positive effects on economic growth, while government spending on non-core areas of has a negative impact on economic growth.

3. The Impact of Public Expenditure on Economic Growth: Empirical Evidence

3.1 Positive Impact

After observing that government expenditure has been on the rise while economic growth has slowed substantially, Landau (1983) empirically examined the relationship between government spending and economic growth in 65 under-developed countries. Based on government spending that was disaggregated into capital and investment spending; and using panel data analysis techniques, the study revealed that though the effect was minute, government capital spending had a positive impact on economic growth.

Aschauer (1989) investigated the impact of aggregated and disaggregated public expenditure on economic growth in the United States of America (US) during the period from 1949 to 1985 using annual data. The empirical results revealed that in the US, the non-military public capital stock has a more significant positive impact on economic growth than its military counterpart. Further, Aschauer found that core infrastructure of streets, highways, airports, mass transit, sewers and water systems, has the most explanatory power for productivity.

Easterly and Rebelo (1993) examined the impact of fiscal policy variables on the level of development and rate of growth for a sample of 28 countries during the period from 1970 to 1988. Using cross-sectional methodology, the study revealed that government investment

expenditure on transport and the communication sector has a positive impact on economic growth.

Barro (1999) carried out an empirical investigation into the determinants of economic growth for a panel of 100 countries using data from 1960 to 1995. Government consumption expenditure and government investment spending were some of the key variables included in the study. Among other findings, the results of the study showed that government investment expenditure had a positive impact on economic growth and it was concluded that investment spending by the government should be encouraged in order to boost economic growth.

Yasin (2000) re-examined the effect of government spending on economic growth in 26 sub-Saharan African (SSA) countries from 1987 to 1997. The examination was based on a model derived from an aggregate production function. Based on the application of both fixed-effects and random-effects estimation techniques, the results of the study showed that government expenditure has a positive effect on economic growth in SSA.

Bose *et al*. (2007) concluded that the impact of public expenditure on economic growth is positive, based on a sample of developing countries. In their paper, they examined the growth effects of government expenditure for a panel of 30 developing countries over the 1970s and 1980s, with a particular focus on disaggregated government expenditures. Using a methodology that takes into consideration the role of government budget constraints and the possible biases arising from omitted variables, they found that government capital expenditure is positively and significantly correlated with economic growth. Further, at the disaggregated level, government investment in education and total expenditures on education were the only outlays that had a positive impact on economic growth after the budget constraint and omitted variables had been taken into consideration.

Ghosh and Gregoriou (2008) also investigated the relationship between disaggregated government expenditure and economic growth in 15 developing countries' general methods of moment (GMM). The results were found to vary depending on the type of government

expenditure under consideration – capital or current. The Keynesian view was found to dominate when government expenditure was proxied by current government spending. The results further showed that government expenditure on operations and maintenance had a stronger positive impact on economic growth than their education and health counterparts.

Alexiou (2009) empirically investigated the relationship between economic growth and government expenditure in the South Eastern European (SEE) economies from 1995 to 2005, using both the fixed effects model and the random coefficient model. The results confirmed that government expenditure has a positive impact on economic growth in the study countries.

Nurudeen and Usman (2010) empirically assessed the impact of disaggregated government spending on economic growth in the case of Nigeria during the period from 1979 to 2007. Government expenditure was disaggregated into capital expenditure, recurrent expenditures, expenditure on education, expenditure on transport and communication, and expenditure on health. Using the co-integration and error correction methodology, the results of the study revealed that government expenditure on transport and communication, and on health, leads to an increase in economic growth in Nigeria.

Wahab (2011) used a worldwide sample in examining the impact of both aggregated and disaggregated government spending on economic growth using two samples – one sample for the aggregated government spending in 97 developing and developed countries during the 1960-2004 period; and the other sample for the disaggregated government spending in 32 countries using the 1980- 2000 data. Based on the symmetric and asymmetric model specifications, the study revealed that aggregate spending by the government has both a positive impact on economic growth and positive output growth effects. From the disaggregated sample, the study further showed that government investment spending has positive output growth effects.

Shahid *et al*. (2013) examined the impact of government expenditure on economic growth in Pakistan during the period from 1972 to 2009. They further split government expenditure into development expenditure and current expenditure components. Using autoregressive distributed lag (ARDL) model, the study revealed that in Pakistan, development expenditure positively affects economic growth.

Attari and Javed (2013) empirically explored the relationship between government expenditure and economic growth in Pakistan using time series data stretching from 1980 to 2010. The study further splits government expenditure into two categories – current expenditure and development expenditure. Based on time-series econometrics tools, the results of the study revealed that both types of government expenditure have a positive impact on economic growth in the study country, both in the short run and in the long run.

Egbetunde and Fasanya (2013) empirically analysed the impact of public expenditure on economic growth in Nigeria based on annual time series data from 1970 to 2010. Government spending was further disaggregated into two categories, capital and recurrent spending. Using the ARDL estimating techniques, the study showed that in Nigeria, both the recurrent and the capital expenditure have a positive impact on economic growth.

Alshahrani and Alsadiq (2014) investigated the long- and short-run impact of government expenditure on economic growth in the economy of Saudi Arabia during the 1969-2010 period. The study further divided government expenditure into various types. Using different econometric techniques, the findings of the study indicated that healthcare expenditure and expenditure on domestic investment have a positive impact on economic growth. The same findings also confirmed that in Saudi Arabia, housing sector expenditure has the same effect on economic growth, however, in the short run.

Al-Fawwaz (2016) examined the impact of government expenditure – and its disaggregated components – on economic growth in Jordan during the period from 1980 to 2013. Using the multiple linear regression model and the OLS model, the results confirmed the existence of a

positive relationship between government expenditure and economic growth in the study country. Thus, both total government expenditure and current government expenditure, were found to have a positive impact on economic growth. This result lent support to the Keynesian view that places importance on government expenditure in propelling economic growth.

Guandong and Muturi (2016) examined the relationship and dynamic interactions between government expenditure and economic growth in South Sudan from 2006 to 2014. However, government expenditure was further divided into various components. Using the regression model for panel data, including random effect to analyse the data, the findings showed that public expenditure on infrastructure, the productive sector and security are positive determinants of economic growth in the study country.

Asghari and Heidari (2016) revisited the government spending-economic growth nexus as they empirically examined the impact of government size on economic growth. The study was based on a sample of selected Organisation for Economic Cooperation and Development - Nuclear Energy Agency (OECD-NEA) countries based on data stretching from 1990 to 2011. Using the Panel Smooth Transition Regression (PSTR) model in the form of a Cobb–Douglas equation function, the results of the study rejected the linearity hypothesis.

Kimaro *et al*. (2017) empirically assessed the impact and efficiency of government expenditure on economic growth in 25 low income SSA countries, covering the period from 2002 to 2015. Using the GMM, the results of the study showed that government expenditure and economic growth were positively related in the study countries.

Leshoro (2017) also put the government spending and economic growth to an empirical test in the case of South Africa using annual data covering the period from 1976 to 2015. Government spending was further disaggregated into various components – government investment spending and government consumption spending. Using the autoregressive distributed lag (ARDL) estimation procedure, the results of the study showed that government spending has a positive impact on economic growth in the study country,

irrespective of the government expenditure component under consideration – investment or consumption expenditure. These results were found to hold irrespective of whether the estimation was in the long run or in the short run. Table 1 summarises studies in favour of positive impact of government expenditure on economic growth.

Table 1: Studies in Favour of Positive Impact of Government Expenditure on Economic Growth

Author(s)	**Region/Country**	**Government Expenditure Proxy (aggregated or disaggregated)**	**Methodology**	**Nature of Impact**
Landau (1983)	65 under-developed countries	Disaggregated	Panel	Positive (capital spending)
Aschauer (1989)	United States of America	Aggregated and disaggregated	Time-series	Positive
Easterly and Rebelo (1993)	A sample of 28 countries	Aggregated	Cross-section	Positive
Barro (1999)	A panel of 100 countries	Disaggregated	Panel	Positive
Yasin (2000)	26 sub-Saharan African countries	Aggregated	Panel	Positive
Bose *et al*. (2007)	A panel of 30 developing countries	Aggregated and disaggregated	Panel	Positive
Ghosh and Gregoriou (2008)	15 developing countries	Disaggregated	Panel	Positive (operations and maintenance)
Alexiou (2009)	South Eastern European (SEE) economies	Aggregated	Panel	Positive

Author(s)	**Region/Country**	**Government Expenditure Proxy (aggregated or disaggregated)**	**Methodology**	**Nature of Impact**
Nurudeen and Usman (2010)	Nigeria	Disaggregated	Time-series	Positive (government expenditure on transport and communication, and on health)
Wahab (2011)	Sample 1 - 97 developing and developed countries Sample 2 - 32 countries	Aggregated and disaggregated	Panel	Positive (overall spending and investment spending)
Shahid *et al.* (2013)	Pakistan	Aggregated and disaggregated	Time-series	Positive (development expenditure)
Attari and Javed (2013)	Pakistan	Aggregated and disaggregated	Time-series	Positive
Egbetunde and Fasanya (2013)	Nigeria	Aggregated and disaggregated	Time-series	Positive (recurrent and the capital expenditure)
Alshahrani and Alsadiq (2014)	Saudi Arabia	Aggregated and disaggregated	Time-series	Positive
Al-Fawwaz (2016)	Jordan	Aggregated and disaggregated	Time-series	Positive
Guandong and Muturi	South Sudan	Aggregated and disaggregated	Time-series	Positive (public

Author(s)	Region/Country	Government Expenditure Proxy (aggregated or disaggregated)	Methodology	Nature of Impact
(2016)				expenditure on infrastructure, productive sector and security)
Asghari and Heidari (2016)	A sample of selected OECD-NEA countries	Aggregated	Panel	Positive
Kimaro *et al*. (2017)	25 low income SSA countries	Aggregated	Panel	Positive
Leshoro (2017)	South Africa	Aggregated and disaggregated	Time-series	Positive

3.2 Negative Impact

After observing that government expenditure has been on the rise while economic growth has slowed substantially, Landau (1983) empirically examined the relationship between government spending and economic growth in 65 under-developed countries. Based on government spending that was disaggregated into capital and investment spending; and using panel data analysis techniques, the study provided evidence of an inverse relationship between government consumption expenditure and economic growth in the study countries.

In his quest to establish the determinants of economic growth in a cross section of 98 countries, Barro (1991) examined the impact of various macro-economic variables, including government expenditure which was split into government investment and government consumption expenditure. Using data stretching from 1960 to 1985, the results of the study revealed that government consumption expenditure was inversely related to economic growth in the sample countries.

Using a 43 developing country data set stretching over 20 years, Devarajan *et al*. (1996) added value to literature on the level of public expenditure and growth by exploring the conditions under which a change in the composition of expenditure results in a higher, and a steady, economic growth rate. Both the physical productivity of the different components of public expenditure as well as the initial shares were considered. The results of the study showed that, contrary to expectations, the capital component of public expenditure had a negative impact on economic growth. The authors concluded that the seemingly productive government expenditure components may turn unproductive if applied excessively.

In 1999, Barro (1999) carried out an empirical investigation into the determinants of economic growth for a panel of 100 countries using data from 1960 to 1995. Government consumption expenditure and government investment spending were some of the key variables included in the study. Among other findings, the results of the study indicated that government consumption expenditure had a negative impact on economic growth and it was concluded that government consumption spending should be relatively low to ensure high levels of economic growth.

Schaltegger and Torgler (2006) also put the government size-economic growth relationship to the test in 2006, when they empirically examined the relationship between the two macroeconomic variables using data for Switzerland over the 1981-2001 period. Public expenditure was further disaggregated into two components – operating budgets and capital budgets. The government spending by the state, and local governments, was also considered. Using time-series analysis tools, the finding of the study revealed that in Switzerland, the overall spending by the government as well as government spending from operating budgets, has a robust negative impact on economic growth.

Ghosh and Gregoriou (2008) also investigated the relationship between disaggregated government expenditure and economic growth in 15 developing countries using the GMM. The results varied depending on the type of government expenditure under consideration – capital or current. Capital spending was found to have a negative impact on economic growth.

Taban (2010) re-investigated the government expenditure-economic growth nexus for the Turkish economy using quarterly data covering the period from period from 1987: Q1 to 2006: Q4. Various proxies were used to capture government expenditure – total government expenditure, the share of the government consumption spending to GDP, government investment expenditure to GDP and government consumption spending to GDP ratio. Based on ARDL bounds testing approach, the results of the study revealed that the share of the total government spending, and the share of the government investment spending to GDP had a negative impact on economic growth in Turkey.

Nurudeen and Usman (2010) empirically assessed the impact of disaggregated government spending on economic growth in the case of Nigeria during the period from 1979 to 2007. Government expenditure was disaggregated into capital expenditure, recurrent expenditures, expenditure on education, expenditure on transport and communication, and expenditure on health. Using the co-integration and error correction methodology, the results of the study revealed that government capital expenditure, recurrent expenditure and government expenditure on education have a negative impact on economic growth in Nigeria.

Butkiewicz and Yanikkaya (2011) empirically examined the impact of aggregated and disaggregated government expenditure on economic growth using a sample of over 100 developed and developing nations. Based on the Seemingly-Unrelated Regression (SUR) technique, the results of the study indicated that despite the inconsistencies across the sample, in the main, aggregated government expenditure as well as consumption expenditure, was found to have a negative impact on economic growth in the study countries.

Ndambiri *et al*. (2012) examined the determinants of economic growth in a panel of 19 sub-Saharan African countries, over the years 1982 to 2000. Among the variables incorporated in the model was public expenditure. Using Generalised Method of Moments (GMM), the results of the study indicated that government expenditure leads to negative economic growth in the sample study countries.

Altunc and Aydın (2013) examined the relationship between government expenditure and the rate of economic growth in three countries – Turkey, Romania and Bulgaria – using data for the 1995-2011 period. The main focus of the study was to establish whether the relationship between these two variables is linear or an "inverted U" shape; and to find out the optimal level of government spending in each of the study countries. Using the ARDL bounds testing approach, the empirical finding of the study revealed that in the study countries, the level of government expenditure exceeded the optimal level, hence a lower than desired economic growth rate.

Hasnul (2015) put the relationship between government expenditure and economic growth in Malaysia to the test for the period spanning from 1970 to 2014. On the one hand, the government expenditure was further disaggregated into government operating and development expenditures. On the other hand, the government expenditure was split based on the sector within which the expenditure is allocated. Using an OLS technique, the results revealed the existence of a negative relationship between aggregate government expenditure and economic growth in the study country. The results of the study further confirmed that government expenditure on the development category and on the housing sector, also has a negative impact on economic growth in Malaysia.

Guandong and Muturi (2016) examined the relationship and dynamic interactions between government expenditure and economic growth in South Sudan from 2006 to 2014. However, government expenditure was further divided into various components. Using the regression model for panel data, including random effect, to analyse the data, the findings showed that public expenditure on social services sector is found to have a negative impact on economic growth in the study country.

Chirwa and Odhiambo (2016) carried out a study to empirically determine the long-run drivers of economic growth in South Africa over the period from 1970 to 2013. Using the ARDL technique, the results of the study indicated that government spending had a

significant negative impact on economic growth in South Africa, both in the short run and in the long run.

Sáez *et al*. (2017) studied the relationship between government spending and economic growth in the European Union countries using data stretching from 1994 to 2012. Using panel data techniques, the results of the study revealed that, while the relationship between government spending and economic growth can be positive or negative, depending on the countries included in the sample, the period of estimation and the variables used to proxy the public sector size, government spending has a negative impact on economic growth in the European Union countries. Table 2 summarises studies in favour of the negative impact of government expenditure on economic growth.

Table 2: Studies in Favour of Negative Impact of Government Expenditure on Economic Growth

Author(s)	**Region/Country**	**Government Expenditure Proxy (aggregated or disaggregated)**	**Methodology**	**Nature of Impact**
Landau (1983)	65 under developed countries	Disaggregated	Panel	Negative (consumption expenditure)
Barro (1991)	98 countries	Disaggregated	Cross-section	Negative (consumption expenditure)
Devarajan *et al*. (1996)	43 developing countries	Disaggregated	Panel	Negative (capital expenditure)
Barro (1999)	100 countries	Disaggregated	Panel	Negative (consumption expenditure)
Schaltegger	Switzerland	Aggregated and disaggregated	Time-series	Negative

Author(s)	**Region/Country**	**Government Expenditure Proxy (aggregated or disaggregated)**	**Methodology**	**Nature of Impact**
and Torgler (2006)				(Overall spending and spending from operating budgets)
Ghosh and Gregoriou (2008)	15 developing countries	Disaggregated	Panel	Negative (Capital spending)
Taban (2010)	Turkish economy	Aggregated and disaggregated	Time-series	Negative (Overall spending and investment spending)
Nurudeen and Usman (2010)	Nigeria	Disaggregated	Time-series	Negative (capital expenditure, recurrent expenditure and government expenditure on education)
Butkiewicz and Yanikkaya (2011)	Over 100 developed and developing nations	Aggregated and disaggregated	Panel	Negative (aggregated government expenditure and consumption expenditure
Ndambiri *et al*. (2012)	19 sub-Saharan African countries	Aggregated	Panel	Negative

Author(s)	Region/Country	Government Expenditure Proxy (aggregated or disaggregated)	Methodology	Nature of Impact
Altunc and Aydın (2013)	Turkey, Romania and Bulgaria	Aggregated	Time-series	Negative
Hasnul (2015)	Malaysia	Aggregated and disaggregated	Time-series	Negative (overall spending and spending on on the development category and on the housing sector)
Guandong and Muturi (2016)	South Sudan	Aggregated and disaggregated	Time-series	Negative (spending on social services sector)
Chirwa and Odhiambo (2016)	South Africa	Aggregated	Time-series	Negative
Sáez *et al*. (2017)	European Union countries		Panel	Negative

3.3 Insignificant Impact

In his quest to establish the determinants of economic growth in a cross section of 98 countries, Barro (1991) examined the impact of various macro-economic variables, including government expenditure, which was split into government investment and government consumption expenditure. Using data stretching from 1960 to 1985, the results of the study indicated that government investment expenditure was insignificantly related to economic growth in the sample countries.

Schaltegger and Torgler (2006) also put the government size-economic growth relationship to the test in 2006, when they empirically examined the relationship between the two macroeconomic variables using data for Switzerland over the 1981-2001 period. Public expenditure was further disaggregated into two components – operating budgets and capital budgets. The government spending by the state, and local governments, was also considered. Using time-series analysis tools, the finding of the study revealed that in Switzerland, government spending from capital budgets has an insignificant impact on economic growth.

Bose *et al*. (2007) examined the impact of public expenditure on economic growth in a sample of 30 developing countries using the 1970s and 1980s data. Public expenditure was further disaggregated into capital and current expenditure. Using panel data techniques, they found that, while capital expenditure has a positive impact on economic growth, current expenditure exhibited neutrality traits, as it was found to have no significant impact on economic growth.

Taban (2010) re-investigated the government expenditure-economic growth nexus for the Turkish economy using quarterly data covering the period from period from 1987: Q1 to 2006: Q4. Various proxies were used to capture government expenditure – total government expenditure, the share of the government consumption spending to GDP, government investment expenditure to GDP and government consumption spending to GDP ratio. Based on ARDL bounds testing approach, the results of the study revealed that there is no significant relationship between government expending and economic growth in Turkey when government expenditure is proxied by government consumption spending.

Wahab (2011) used a worldwide sample to examine the impact of both aggregated and disaggregated government spending on economic growth using two samples – one sample for aggregated government spending in 97 developing and developed countries during the 1960-2004 period; and the other sample for disaggregated government spending in 32 countries using the 1980- 2000 data. Based on the symmetric and asymmetric model specifications, the

study revealed that government consumption spending has no significant output growth effects.

Shahid *et al.* (2013) examined the impact of government expenditure on economic growth in Pakistan during the period from 1972 to 2009. They further split government expenditure into development expenditure and current expenditure components. Using an autoregressive distributed lag (ARDL) model, the results showed that in Pakistan, current expenditure does not contribute to economic growth.

Egbetunde and Fasanya (2013) empirically analysed the impact of public expenditure on economic growth in Nigeria based on annual time series data from 1970 to 2010. Government spending was further disaggregated into two categories, capital and the recurrent spending. Using the ARDL estimating techniques, the study revealed that total government spending had an insignificant impact on economic growth in Nigeria.

Hasnul (2015) put the relationship between government expenditure and economic growth in Malaysia to the test for the period spanning from 1970 to 2014. On the one hand, government expenditure was further disaggregated into government operating and development expenditures. On the other hand, government expenditure was split based on the sector within which the expenditure is allocated. Using an OLS technique, the results of the study confirmed that operating government expenditure and expenditure on the education, defence and healthcare sectors, had no impact on economic growth in Malaysia. Table 3 summarises studies in favour of insignificant impact of government expenditure on economic growth.

Table 3: Studies in Favour of Insignificant Impact of Government Expenditure on Economic Growth

Author(s)	**Region/Country**	**Government Expenditure Proxy (aggregated or disaggregated)**	**Methodology**	**Nature of Impact**

Author(s)	**Region/Country**	**Government Expenditure Proxy (aggregated or disaggregated)**	**Methodology**	**Nature of Impact**
Barro (1991)	98 countries	Disaggregated	Cross-section	Insignificant (investment expenditure)
Schaltegger and Torgler (2006)	Switzerland	Aggregated and disaggregated	Time-series	Insignificant (spending from capital budgets)
Bose *et al*. (2007)	A panel of 30 developing countries	Aggregated and disaggregated	Panel	Insignificant (current expenditure)
Taban (2010)	Turkish economy	Aggregated and disaggregated	Time-series	Insignificant (consumption spending)
Wahab (2011)	Sample 1 - 97 developing and developed countries Sample 2 - 32 countries	Aggregated and disaggregated	Panel	Insignificant (consumption spending)
Shahid *et al.* (2013)	Pakistan	Aggregated and disaggregated	Time-series	Insignificant (current expenditure)
Egbetunde and Fasanya (2013)	Nigeria	Aggregated and disaggregated	Time-series	Insignificant (total government spending)
Hasnul (2015)	Malaysia	Aggregated and disaggregated	Time-series	Insignificant (operating

Author(s)	Region/Country	Government Expenditure Proxy (aggregated or disaggregated)	Methodology	Nature of Impact
				government expenditure and the expenditure on the education, defence and healthcare sectors)

4. Concluding Remarks

This paper has reviewed both theoretical and empirical literature review on the relationship between government expenditure and economic growth, with specific focus on the impact of the former on the latter. The reviewed literature provides coverage on developed and developing countries, with some instances having a sample of mixed countries at developed and developing stages. Empirical works of varying methodologies were also reviewed. What came out of the literature review exercise prominently was that the impact of government expenditure on economic growth was not definite. It ranged from being positive to negative and to no impact all. While the first two possibilities were the only outcome possible from a theoretical viewpoint, all three outcomes found empirical support. The study has also found that the impact of government spending on economic growth varied considerably depending on the study country, methodology used, the proxy for government expenditure, and study period under consideration. This review has also shown that most studies assessing the impact of government expenditure – whether aggregated or disaggregated – on economic growth have over-relied on panel data analysis, especially in the earlier studies. However, in the recent past, time-series based methodologies have gained traction. Although the impact of government spending on economic growth was found to be inconclusive, based on the studies reviewed, the scale tilts towards positive impact.

References

Alexiou, C. 2009. Government Spending and Economic Growth: Econometric Evidence from the South Eastern Europe (SEE). *Journal of Economic and Social Research,* 11(1): 1-16.

Al-Fawwaz, TM. 2016. The impact of government expenditures on economic growth in Jordan (1980-2013). *International Business Research*, 9(1): 99-105.

Alshahrani, S. and Alsadiq, A. 2014. economic growth and government spending in Saudi Arabia: An empirical investigation. IMF Working Paper WP/14/3. International Monetary Fund.

Altunc, OF. and Aydın, C. 2013. The relationship between optimal size of government and economic growth: Empirical Evidence from Turkey, Romania and Bulgaria. *Procedia - Social and Behavioral Sciences*, 92: 66-75.

Aschauer, DA. 1989. Is public expenditure productive? *Journal of Monetary Economics*, 23(2): 177-200.

Asghari, R. and Heidari, H. 2016. An investigation of the impact of size of the government on economic growth: Some new evidence from OECD-NEA Countries. *Iranian Economic Review*, 20(1): 49-68, DOI: 10.22059/ier.2016.58278

Attari, MIJ. and Javed, AY. 2013. Inflation, Economic Growth and Government Expenditure of Pakistan: 1980-2010. *Procedia Economics and Finance*, 5: 58-67, https://doi.org/10.1016/S2212-5671(13)00010-5

Barro, RJ. 1989. Economic growth in a cross section of countries. NBER Working Paper, 3120.

Barro, RJ. 1991. Economic Growth in a Cross-Section of Countries." *Quarterly Journal of Economics*, 106: 407-43.

Barro RJ. 1999. Determinants of Democracy. *Journal of Political Economy*, 107(S6): S158-S183, https://doi.org/10.1086/250107

Bose, N., Haque, ME. and Osborn, DR. 2007. Public expenditure and economic growth: A disaggregated analysis for developing countries. *The Manchester School*, 75(5): 533-556, https://doi.org/10.1111/j.1467-9957.2007.01028.x

Butkiewicz, JL. and Yanikkaya, H. 2011. Institutions and the impact of government spending on growth. Working Paper Series, Department of Economics Alfred Lerner College of Business & Economics, University of Delaware. Working Paper No. 2008-23.

Chirwa, TG. and Odhiambo, NM. 2016. What Drives Long-Run Economic Growth? Empirical Evidence from South Africa. Economia Internazionale / International Economics, Camera di Commercio Industria Artigianato Agricoltura di Genova, 69(4): 429-456.

Devarajan, S. Swaroop, V. and Zou, H. 1996. The composition of public expenditure and economic growth. *Journal of Monetary Economics*, 37(2): 313-344, https://doi.org/10.1016/S0304-3932(96)90039-2

Easterly, W. and Rebelo, S. 1993. Fiscal policy and economic growth: An empirical investigation. *Journal of Monetary Economics*, 32(3): 417-458, https://doi.org/10.1016/0304-3932(93)90025-B

Egbetunde, T. and Fasanya, IO. 2013. Public expenditure and economic growth in Nigeria: Evidence from auto-regressive distributed lag specification. *Zagreb International Review of Economics & Business,* 16(1): 79-92.

Ghali, KH. 1998. Government size and economic growth: evidence from a multivariate cointegration analysis. *Applied Economics,* 31, 975-987.

Ghosh, S and Gregoriou, A. 2008. The composition of government spending and growth: is current or capital spending better? *Oxford Economic Papers,* 60(3): 484-516, https://doi.org/10.1093/oep/gpn005

Guandong, BYD. and Muturi, WM. 2016. The relationship between public expenditure and economic growth in south Sudan. *International Journal of Economics, Commerce and Management,* 4(6): 235-259.

Hasnul, AG. 2015. The effects of government expenditure on economic growth: the case of Malaysia. MPRA Paper. Online. Available from <https://mpra.ub.uni-muenchen.de/71254/>,. [Accessed 25 October 2018].

Kimaro, EL., Keong, CC. and Sea, LL. 2017. Government Expenditure, Efficiency and Economic Growth: A Panel Analysis of Sub-Saharan African Low Income Countries. *African Journal of Economic Review,* V(II), 34-54.

Landau, D. 1983. Government Expenditure and Economic Growth: A Cross-Country Study. *Southern Economic Journal*, 49: 783-797.

Leshoro, TLA. 2017. An empirical analysis of disaggregated government expenditure and economic growth in South Africa. UNISA Economic Research Working Paper Series. Working Paper 10/2017.

Lowenberg, AD. 1990. Neoclassical economics as a theory of politics and institutions. *Cato Journal*, 9(3): 619-639.

Ndambiri H K., Ritho C., Ng'ang'a, SI., Kubowon, PC., Mairura, FC., Nyangweso, PM., Muiruri, EM. and Cherotwo, FH. 2012. Determinants of economic growth in sub-Saharan Africa: A Panel Data Approach. *International Journal of Economics and Management Sciences,* 2(2): 18-24.

Nurudeen, A and Usman, A. 2010. Government expenditure and economic growth in

Nigeria, 1970 - 2008: A disaggregated analysis. Business and Economics Journal, 4: 1-11.

Ram, R. 1986. Government Size and Economic Growth: A New Framework and Some Evidence from Cross-Section and Time-Series Data. *The American Economic Review* 76(1): 191-203.

Romer, PM. 1986. Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002-1037.

Sáez1, MP., Santiago Álvarez-García, S. and Daniela Castañeda Rodríguez, DC. 2017. Governmen expenditure and economic growth in the European Union countries: New evidence. In Eds: Chodkowska-Miszczuk, J. and Szymańska D. *Bulletin of Geography. Socio-economic Series*, 36: 127-133, DOI: http://dx.doi.org/10.1515/bog-2017-0020

Schaltegger, C. and Torgler, B. 2006. Growth effects of public expenditure on the state and local level: evidence from a sample of rich governments. *Applied Economics*, 38(10): 1181-1192.

Shahid. A., Rabbi, F., Hayat, U. and Ali, N. 2013. The composition of public expenditures and economic growth: Evidence from Pakistan. *International Journal of Social Economics,* 40(11): 1010-1022, https://doi.org/10.1108/IJSE-05-2012-0081

Taban, S. 2010. An Examination of the Government Spending and Economic Growth Nexus for Turkey Using Bound Test Approach. *International Research Journal of Finance and Economics,* 48: 184-193.

Wahab, M. 2011. Asymmetric output growth effects of government spending: Cross-sectional and panel data evidence. *International Review of Economics & Finance,* 20(4): 574-590.

Yasin, M. 2000. Public Spending and Economic Growth: Empirical Investigation of Sub-Saharan Africa. *Southwestern Economic Review,* 59-68.