



Effect of Government Expenditure on Economic Growth in Nigeria

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Publication Process	Date
Received	October 12th, 2020
Accepted	November 15th, 2020
Published	November 30th, 2020

ABSTRACT

This study examined the effect of government expenditure on the economic growth of Nigeria. Multiple Linear regression model was adopted for analysis. Recurrent expenditure and capital expenditure were the independent variables while the gross domestic product rate was used as the dependent variable. The findings from this study reveal that while Capital expenditure has no significant impact on Gross Domestic Product in Nigeria, however, recurrent expenditure has a significant impact on Gross Domestic Product in Nigeria, thus buttressing the need for encouragement as well as an increase in the private sector investment.

Keywords: Recurrent Expenditure; Capital Expenditure; Government Expenditure; Economic Growth; Nigeria

Introduction

Over the years, government expenditure has been increasing in geometric terms through various government activities and interactions with its Ministries, Departments, and Agencies (MDA's). It is generally believed that government expenditure either recurrent or capital expenditure in social and economic infrastructure can enhance economic growth, the financing of such government expenditure to provide essential infrastructural facilities such as transport, telecommunications, water, electricity and sanitation, waste disposal, education, and health can be growth retarding (for example, the negative effect associated with taxation and excessive debt) (Samira, 2016). The size and structure of government expenditure will determine the pattern and form of growth in the output of the economy (Taiwo, and Abayomi, 2011).

The structure of Nigerian government expenditure can broadly be categorized into capital and recurrent expenditure. The recurrent expenditure is government expenses on administration, such as wages, salaries, interest on loans, maintenance, etc., whereas expenses on capital projects like roads, airports, education, telecommunication, electricity generation, etc., are referred to as capital expenditure. One of the main purposes of government spending is to provide infrastructural facilities (Taiwo and Abayomi, 2011). In Nigeria, government expenditure has continued to rise due to the huge receipts from production and sales of crude oil, and the increased demand for public (utilities) goods like roads, communication, power, education, and health (Nurudeen and Usman 2010). Besides, there is an increasing need to provide both internal and external security for the people and the nation (Jelilov, 2015).

Globally, public spending has been a source of interest to both scholars and macroeconomic policymakers due to its effects on the level of growth in an economy. Many political philosophers like Hobbes and Locke considered the hypothetical disadvantages of life without government (Miles, 2003).

According to Keynesian view, the government could reverse economic downturns by borrowing money from the private sector and then returning the money to the private sector through various spending programs (Jelilov et al, 2015). High levels of government consumption are likely to increase employment, profitability, and investment via multiplier effects on aggregate demand. Thus, government expenditure, even of a recurrent nature, can contribute positively to economic growth. On the other hand, endogenous growth models such as Barro (1990), predict that only those productive government expenditures will positively affect the long-run growth rate. Various empirical studies on the relationship between government expenditure and economic growth also arrived at different and even conflicting results. Some studies suggest that increase in government expenditure on socioeconomic and physical infrastructure in the long-run impacts growth rate. For instance, government expenditure on health and education raises the productivity of labor and increase the growth of national output. Similarly, expenditure on infrastructure such as road, power, etc. reduces production costs, increases private sector investment and profitability of firms, thus ensuring economic growth (Jelilov et al, 2015). On the other hand, observations that growth in government spending, mainly based on non-productive spending is accompanied by a reduction in income growth has given rise to the hypothesis that the greater the size of government intervention the more negative is its impact on economic growth (Abu and Abdullah, 2010).

Statement of the Problem

In the last decade, Nigeria's economy has metamorphosed from the level of millions and Billions of Naira and postulating to trillions of Naira on the expenditure side of the budget. This will not be surprising if the economy is experiencing surplus or equilibrium on the records of balance of payment (Jelilov et al, 2016). Better still, if there are infrastructures to improve commerce with the system or social amenities to raise the welfare of the average citizen of the economy. All these are not there, yet we always have a very high estimated expenditure. This indicates that something is definitely wrong either with the way government expands budget or with the ways and manners, it has always been computed (Jelilov, 2016). Unfortunately, the rising government expenditure has not translated into meaningful growth and development, as Nigeria ranks among the poorest countries in the world.

In addition, many Nigerians have continued to wallow in abject poverty, while more than 50 percent live on less than US\$2 per day. Coupled with this, is the dilapidated infrastructure (especially roads and power supply) that has led to the collapse of many industries, including high levels of unemployment (Nurudeen and Usman 2010). Moreover, macroeconomic indicators like the balance of payments, import obligations, inflation rate, exchange rate, and national savings problems reveal that Nigeria has not fared well since the 1980s.

In the view of the importance of government expenditure in the transformation of an economy, especially that of Nigeria which is public sector driven, it is essential that there is a need to determine the actual impact of government expenditure on the Nigeria economy, whether high public spending is responsible for the lack of development and the sectors that the government needs to curtail or increase expenditure as the case may be. In light of the above, this research work intends to examine the impact of government expenditure on economic growth in Nigeria.

Objectives of the Study

- i. To ascertain the impact of capital expenditure on the Gross Domestic Product in Nigeria.
- ii. To determine the impact of recurrent expenditure on Gross Domestic Product in Nigeria.

Research Questions

- i. What is the impact of capital expenditure on the Gross Domestic Product in Nigeria?
- ii. To what extent does recurrent expenditure affect the Gross Domestic Product in Nigeria?

Research Hypothesis

- i. Capital expenditure has no significant impact on the Gross Domestic Product in Nigeria.
- ii. Recurrent expenditure has no significant impact on the Gross Domestic Product in Nigeria.

Theoretical Framework

Theories are viewed generally because they are presumed useful in accounting for some observed phenomenon. Various theories have been propounded to explain clearly what determines economic growth. This research work is based on the Neo-classical endogenous theory of economic growth.

a. Neo-Classical Theory: The Endogenous Growth Theory

The endogenous growth theory was developed as a reaction to omissions and deficiencies in the Solow-Swan neoclassical growth model. It is a new theory that explains the long-run growth rate of an economy on the basis of endogenous factors as against exogenous factors of the neoclassical growth theory (Jhingan, 2010). The Solow - Swan neoclassical growth model explains the long-run growth rate of output based on two exogenous variables: the rate of population growth and the rate of technological progress and that are independent of the saving rate. As the long-run growth rate depended on exogenous factors, the neoclassical theory had few policy implications. As pointed out by Romer, 'In models with exogenous technical change and exogenous population growth, it never really mattered what the government did'.

The new growth theory does not simply criticize the neoclassical growth theory. Rather, it extends the latter by introducing endogenous technical progress in growth models. The endogenous growth models have been developed by Arrow, Romer, and Lucas, among other economists. The endogenous growth theory has an important policy implication for both developed and developing economies. This theory suggests that the major contributions of both physical and human capital to growth may be larger than suggested by the Solow residual model. Investment in education or research and development of a firm has not only a positive effect on the firm itself but also spillover effects on other firms and hence on the economy as a whole.

Alternatively, Buchanan and Wagner argued that increases in government revenues may lead to decreases in government expenditures through fiscal illusion. In particular, if the government is financing expenditures by means other than direct taxation, the fiscal illusion occurs because the public pays less in direct taxation but more in the form of indirect taxation (e.g. crowding-out effects and bracket creep caused by inflation). If indirect taxation declines while direct taxation increases, this trend could reduce government expenditures.

b. The Classical Theory of Economic Growth

The proponents of the classical theory are Adam Smith (1723 - 1790), David Ricardo (1772 – 1823), and others. To the classical economists; what actually determines the growth rate and thus, ultimately, the wealth of nations? The expansion process in Smith's growth model depends, as is still the case in most modern growth theorizing, on the level of inputs of three factors of production land, labor, and capital and on technical progress. Increases in the size

of the labor force (L), in the amount of capital (K), and the available land (H), all lead to increases in total output (Y), suggesting a basic production function of the form:

$$Y = f(L, K, H)$$

Growth in total output (Yg) will be caused by growth in the labor force (Lg), in the capital stock (Kg), and in the supply of land (Hg). In addition, improvements in technology (Tg) lead to expanded output by increasing the productivity of the factors inputs:

$$Yg = f(Lg, Kg, Hg, Tg)$$

To the classical, in a stationary economy in which the labor force (and the population), and the stock of capital are constant, then the output will also be constant and there will be no economic growth. The real wage earned by labor will be just enough to provide a subsistence living, with no surplus to make possible an increase in population. Similarly, on the capital side, new investment (I), financed by the new saving (S) of capitalists, will be just enough to replace depreciation of existing capital goods, so there is no growth in the stock of productive capital goods. The increased output makes possible increased saving and investment, which in turn creates conditions favorable for increasing the extent of specialization and further improving productivity. This scenario also permits a rise in wages above subsistence level which encourages population growth and the expansion of the labor force a requirement for continued economic growth.

c. Neo-Keynesian Theory of Economic Growth

Both Harrod and Domar are interested in discovering the rate of income growth necessary for smooth and uninterrupted working of the economy. Though their models differ in detail, yet they arrive at similar conclusions. Harrod and Domar assign a key role to invest in the process of economic growth. But they lay emphasis on the dual character of investment. Firstly, it creates income, and secondly, it augments the productive capacity of the economy by increasing its capital stock. The former may be regarded as the 'demand effect' and the latter, the 'supply effect' of investment. Hence so long as the net investment is taking place, real income and output will continue to expand.

However, for maintaining a full-employment equilibrium level of income from year to year, it is necessary that both real income and output should expand at the same rate at which the productive capacity of the capital stock is expanding. Otherwise, any divergence between the two will lead to an excess of idle capacity, thus forcing entrepreneurs to curtail their investment expenditures. Ultimately, it will adversely affect the economy by lowering incomes and employment in the subsequent periods and moving the economy off the equilibrium path of steady growth. Thus, if full employment is to be maintained in the long run, net investment should expand continuously. This further requires continuous growth in real income at a rate sufficient enough to ensure full capacity use of a growing stock of capital. This required rate of income growth may be called the warranted rate of growth or "the full capacity growth rate according to Harrod and Domar.

Empirical Review

Several studies had been undertaken on the relationship between public expenditure and economic growth. According to Romp and De Haan (2005), the techniques adopted by the empirical studies can be grouped into the production function approach, which is the most commonly used, the cost function approach, which exploits the dual properties of cost and production functions, vector autoregressive (VAR) studies, cross-country, or regional cross-section growth regressions and structural econometric models with public investment but the findings are generally mixed.

Some of the recent empirical studies include Bose, et al (2007) which examined the growth effect of public expenditure by sectors using data from a panel of 30 developing countries covering the period of 1970-1990. The findings show that public capital expenditure is positively correlated with economic growth, while the growth effects of current expenditure is insignificant for the group of countries (Jelilov et al, 2016). Meanwhile, at the sectoral level, government expenditure on education is the only outlay that remains significant throughout the analysis. While the growth effect of transport and communication, defense initially had a significant impact, but could not survive when other sectors and budget constraints were incorporated into the analysis.

Devarajan et al., (1996) studied the effects of different expenditure components of growth. The study covered 43 countries for periods of 1970 to 1990. The study shows that current expenditure has a positive impact on growth, while capital expenditure exerts a negative impact on growth. But when a sub-sample of developed countries were considered the result was reversed, indicating that, the earlier result might be a result of corruption and inefficiency in the use of public funds in the developing countries (Jelilov et al, 2016).

Haque and Kim (2003) examined the impacts of public investment on the economic growth of 15 developing countries using dynamic panel data techniques. The findings indicated that public investment in transportation has dynamic effects on economic growth. Sutherland et al., (2009) also examined the effects of infrastructure on economic growth by running a cross country growth regression. The study confirmed that investment in public infrastructure, especially in form of telecommunications and energy generation has a strong and significant effect on economic growth.

Similarly, Romp and De Haan (2005) following a survey of the recent empirical literature on the subject found that, with respect to the earlier contributions, there is more agreement about the positive effect of public capital on growth. Semmler et al., (2007) investigated whether a country could use fiscal policy (and in particular, the level and composition of public expenditure) to promote sustainable growth and welfare in low- and middle – income countries. The study covered 35 countries and a model was developed following the production function approach. The model was calibrated. The study found that the composition of public investment expenditure matters, as the gains of moving to optimal allocation between public infrastructure, and education and health facilities are significant. Based on the model and the calibration exercise, a practical rule of thumb suggests that about two-thirds of public investment should be directed towards public infrastructure that facilitates market production. The paper also noted that greater emphasis on education and health relative to investments that may contribute to the expansion of market production may result in slower growth/progress in reducing poverty (Jelilov et al, 2016).

Chuba and Weber (1997) delve into the link between public expenditure and economic growth in Nigeria by regressing growth on public expenditure on six functional categories (Education, health, social welfare, transport, justice, and national defense) using the data for 1950-1994. The authors used time series models and OLS estimation method and found that fiscal spending can influence long-run growth. However, out of the six expenditure categories only two (Education and Health) had been found to have permanent growth effects. The effect of education was positive while that of health was negative.

Ghani and Din, (2006) explored the role of public investments in the process of economic growth. The model consists of four variables; public investment, private investment, public consumption, and GDP for the period of 1973- 2004 for Nigeria. Time series and VAR modeling approach were used for the study and it was found that growth is largely driven by private investment than public investment and that public investment crowd out private investment.

David (2006) examined the growth effect of public expenditure at the state and local levels in Nigeria having identified that most of the previous studies concentrated on aggregate public expenditure. The study covered the period of 1981 and 2001. The finding of the study shows that public expenditure at both levels have negative impacts on growth as found in the previous studies at aggregate levels. Badawi (2003) found that the impact of private investments on real growth in Sudan has been more pronounced compared to that of public investment. While the crowding-out effect of public investment in private investment was found to be highly significant. Similar evidence was found in Pakistan by Ghani and Din, (2006) using a VAR model.

Contrary, to Badawi (2003), Ghani and Din, (2006), Blanchard and Perotti (2002) and, Schaltegger and Torgler (2006) found that both private and public expenditure has insignificant impacts on growth. Recent studies in Nigeria include Maku (2009), Nurudeen and Usman (2010), and Akpan (2005). The resulting findings are equally mixed. Nurudeen and Usman (2010) for instance, show that government total recurrent and capital expenditure had insignificant growth effects and the impact of expenditure on education was negative. Only expenditure on transport and communication and health had positive effects on growth in their findings. This is partly in consonance to Fajingbensi and Odusola (1999) which found the contribution of recurrent expenditure to growth as insignificant.

The findings of Akpan (2005) also indicated the growth effects of the different components of government expenditure to be weak. This may be as a result of the prevailing corruption in the country as noted by Haque and Kneller (2008) that corruption increases public investment and reduces the returns to public investment, eventually, making it ineffective in promoting growth.

In spite of the diversity of the reviewed empirical studies in terms of methodologies, coverage, and level of country developments, almost a common conclusion has been apparent. Government expenditure on education, transportation, infrastructure, and telecommunication has persistently appeared to have had significant growth effects on both the developed and developing countries. These studies include Easterly and Rebelo (1993), Singh R.J and Weber, R (1997); Bose, N et al., (2007), Haque and Kim (2003), Sutherland et al., (2009) and Semmler et al., (2007), however, the impacts of capital and recurrent expenditure on growth have been somehow mixed and inconclusive. While the majority of the studies, especially on the rich countries indicated that the large government size is detrimental to economic growth (Schaltegger and Torgler, 2006 and Abu- Badaer and Abu Quarn (2003). From the review above, empirical evidence on the impacts of government expenditure on economic growth in Nigeria is scanty. This study, therefore, not only contributes to the debate on the use of fiscal policy to influence growth but also provides further empirical evidence on the impacts of government expenditure on economic growth in Nigeria.

Research Methodology

In this study, ex-post facto research design was adopted for the study. According to Anyanwu (2000), Ex-post facto research means the study carried out after the facts have been known or the event has taken place. It is a design that helps to explain the relationship between two variables. The suitability of this design could be justified from the fact that the study aims to examine the relationship between government expenditure and economic growth in the country.

Secondary sources of data were utilized for the study. The data are mainly time-series data obtained from the Nigeria Bureau of Statistics, Central Bank of Nigeria, and the World Bank.

Quantitative data collection method was selected for this research study. The following are the methods used for this study; Government censuses, Information from other government departments, Libraries, Internet, Business Journals

The population of this study was defined in one part: population-based on secondary data. For the purpose of this secondary data collection, the entire public sector constitutes the population of this study. Accordingly, Ministries, Departments, and Agencies (MDAs) were selected on the basis of their involvement in the national budget preparation, review, or audit, as well as the potentials to have national data. To that end, the following MDAs in Abuja were considered and visited for the purpose of obtaining secondary data: Federal Ministry of Finance (FMOF); National Bureau of Statistics (NBS); and the Central Bank of Nigeria (CBN). More so, a time horizon of 10 years (2009-2018) was considered for the purpose of gathering data relating to the specific attributes of the dependent variable and the independent variable.

Table 1 Capital Expenditure, Recurrent Expenditure and GDP from 2009 to 2018

YEAR	CE	RE	GDP
2009	1152.797	2127.966	44,285.56
2010	883.8745	3109.437	54,612.26
2011	918.5489	3314.513	62,980.40
2012	874.7	3325.157	71,713.94
2013	1108.386	3214.955	80,092.56
2014	783.1194	3426.941	89,043.62
2015	818.3525	3831.948	94,144.96
2016	653.609	4160.106	101,489.49
2017	1242.296	4779.989	113,711.63
2018	1682.099	5675.201	127,762.55

Source: CBN Statistical Bulletin

Statistical analysis is a vital aspect of research. The choice of an appropriate statistical method depends on factors such as sample size and characteristics, the hypothesis being tested, and research design. In this research work, the secondary data were analyzed through the use of Multiple Linear Regression, using a computer programme called Statistical Package for Social Sciences (SPSS).

Table 2 Model Summary

Equation 1	Multiple R	.949
	R Square	.900
	Adjusted R Square	.872
	Std. Error of the Estimate	9451.600

Table 3 ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Equation 1	Regression	5655765420.792	2	2827882710.396	31.656	.000
	Residual	625329186.313	7	89332740.902		
	Total	6281094607.106	9			

Table 4 Coefficients

		Unstandardized Coefficients			t	Sig.
		B	Std. Error	Beta		
Equation 1	(Constant)	-5397.714	13376.058		-.404	.699
	CE	-9.737	12.329	-.109	-.790	.456
	RE	26.844	3.720	1.000	7.216	.000

The Multiple R of .949 in Table 2 above shows that there exists a strong positive relationship between Capital Expenditure, Recurrent Expenditure, and GDP. The R-squared of .900 shows that Capital Expenditure and Recurrent Expenditure jointly explains about 90% of the variation in GDP. The ANOVA table shows the goodness fit of the model with a general p-value [$<.001<.05$]. The intercept of -5397.714 shows the value of the dependent variable when the independent variables are equal to zero. The slope of -9.737 shows that at every unit increase in capital expenditure, GDP will decrease 10 units while the slope of 26.844 shows that at every unit increase in recurrent expenditure, GDP will increase by 29 units.

H₀ 1 Capital expenditure has no significant impact on the Gross Domestic Product in Nigeria.

The p-value on which basis to reject the null hypothesis is p-value [.456]. Since p-value [.456] > [.05], we cannot reject the null hypothesis and conclude that Capital expenditure has no significant impact on the Gross Domestic Product in Nigeria.

H₀ 2 Recurrent expenditure has no significant impact on the Gross Domestic Product in Nigeria.

The p-value on which basis to reject the null hypothesis is p-value [$< .001$]. Since p-value [$< .001$] $>$ [.05], we reject the null hypothesis and conclude that Recurrent expenditure has a significant impact on the Gross Domestic Product in Nigeria.

Research Findings

1. Capital expenditure has no significant impact on the Gross Domestic Product in Nigeria.
2. Recurrent expenditure has a significant impact on the Gross Domestic Product in Nigeria.

Conclusion

The study examined the effect of Government expenditure on economic growth in Nigeria and concluded that there exists a strong positive relationship between Capital Expenditure, Recurrent Expenditure, and GDP. While capital expenditure had no significant impact, however, recurrent expenditure has a significant impact on the GDP of Nigeria, thus pointing to the fact the need for increase and encouragement of private sector investment.

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