Is there any Significant Contribution in Five Decades of Government Expenditure on Economic Growth in Nigeria?

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Abstract

Fiscal policy can be a powerful tool for stabilizing the economy and avoiding large cyclical swings in unemployment and inflation because of its effect on tax rates, interest rates and government spending. In Nigeria, available statistics show that total federal government expenditure (capital and recurrent) and its components have continued to rise in the last five decades but unfortunately there is no complementary sustained real growth recorded during the period. Using the Keynesian framework arguing that expansion of government expenditure accelerates economic growth and endogenous growth models, this study examined the effect of government expenditure on economic growth in Nigeria for the past five decades. Employing Ordinary Least Square (OLS), the study found that total capital expenditure, total recurrent expenditure, expenditures on transport and communication, education, and health, as well as inflation and overall fiscal balance are statistically significant in explaining changes in economic growth. However, expenditures on defense and agriculture are not significant in explaining economic growth. The study recommended the need for proper management of capital expenditure and recurrent expenditure in a manner that will raise the nation's production capacity and accelerate economic growth.

Key Words: Fiscal Policy, Government Expenditure, Economic Growth

INTRODUCTION

Fiscal policy refers to the way in which the government exerts influence on the economy through its overall budgetary and expenditure decisions. This policy can be a powerful tool for stabilizing the economy and avoiding large cyclical swings in unemployment and inflation because of its effect on tax rates, interest rates and government spending, in an effort to control the economy. The challenge of fiscal policy is to adopt actions that are right for the circumstances. The theory basically states that governments can influence macroeconomic productivity levels by increasing or decreasing tax levels and public spending. This influence, in turn, curbs inflation (generally considered to be healthy when at a level between 2-3%), increases employment and maintains a healthy value of money (Amakom 2008). This is not easy, because there are long and variable lags between government fiscal policy decisions and the resulting impact on the economy. Fiscal policy is therefore a government policy that attempts to influence the direction of the economy through changes in government spending (expenditure) or taxes or simply put, fiscal policy refers to the overall effect of the budget outcome on economic activity. This can be contrasted with the other main type of economic policy, like the monetary policy which attempts to stabilize the economy by controlling interest rates and the supply of money.

On the expenditure side, several categories of expenditure and expenditure policies influence long-run growth. For example, the burgeoning work on endogenous growth theory suggests that government expenditure pattern or level can either promote or retard economic growth through its impact on decisions regarding investment in physical and human capital. In particular, increased spending on education, health, infrastructure, and research and development can boost long-term growth. Higher growth, in turn, generates greater fiscal resources to finance spending on human capital, further bolstering the dynamism of the economy (Amakom 2008).

The relationship between government expenditure and economic growth has continued to generate series of debate among scholars. Government performs two functions- protection (and security) and provisions of certain public goods according to Abdullah (2000) and Al-Yousif (2000). Protection function consists of the creation of rule of law and enforcement of property rights. This helps to minimize risks of criminality, protect life and property, and the nation from external aggression. Under the provisions of public goods are defense, roads, education, health, and power, to mention few. Some scholars argue that increase in government expenditure on socio-economic and physical infrastructures encourages economic growth. For example, government expenditure on health and education raises the productivity of labour and increase the growth of national output. Similarly, expenditure on infrastructure such as roads, communications, power, etc, reduces production costs, increases private sector investment and profitability of firms, thus fostering economic growth. Supporting this view, scholars such as Al-Yousif (2000), Abdullah (2000), Ranjan & Sharma (2008) as well as Cooray (2009 concluded that expansion of government expenditure contributes positively to economic growth.

In Nigeria there have been many irregularities in the country leading to public outcry and there was increasing fraud in government activities resulting from an inappropriate public finance planning and implementation mostly in some of the developing countries (Olopade & Olopade 2010). Banks and businesses have been collapsing thereby leading to crisis of confidence in internal and external activities in the economy. One of the hills that caused this is corruption, indiscipline, lack of accountability which are the hallmarks of the society in developing countries have resulted into decrease in growth and development. The inter-relationship effect is low productivity, avoidable, idle time, leading to loss of trade with advanced countries that have better finished products while the consequential effect is deficit in balance of trade and payment.

Problem and Objective

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. Besides, there is increasing need to provide both internal and external security for the people and the nation. Available statistics show that total government expenditure (capital and recurrent) and its components have continued to rise in the last three decades (Nurudeen & Usman 2010). For instance, government total recurrent expenditure increased from N3, 819.20 million in 1977 to N4, 805.20 million in 1980 and further to N36, 219.60 million in 1990. Recurrent expenditure was N461, 600.00 million and N1, 589,270.00 million in 2000 and 2007, respectively. In the same manner, composition of government recurrent expenditure shows that expenditure on defense, internal security, education, health, agriculture, construction, and transport and communication increased during the period under review. Moreover, government capital expenditure rose from N5, 004.60 million in 1977 to N10, 163.40 million in 1980 and further to N24, 048.60 million in 1990. The value of capital expenditure stood at N239, 450.90 million and N759, 323.00 million in 2000 and 2007, respectively (CBN 2008). Furthermore, the various components of capital expenditure (that is, defense, agriculture, transport and communication, education and health) also show a rising trend between 1977 and 2007 CBN 2008).

Unfortunately, rising government expenditure has not translated to 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. Couple with this, is dilapidated infrastructure (especially roads and power supply) that has led to the collapse of many industries, including high level of unemployment. Moreover, macroeconomic indicators like balance of payments, import obligations, inflation rate, exchange rate, and national savings reveal that Nigeria has not fared well in the last two to three decades.

Given the issues raised above, this paper seeks to examine the effect of government expenditure on economic growth in Nigeria for the past four decades (1970-2010) and to ascertain if there are sector(s) that are drain pipes which do not contribute to economic growth.

Methodology

In applying econometric methods for the specification of economic models, two approaches have been developed; the 'Orthodox Approach' and the 'Experimental approach'. The Orthodox approach consists in formulating a mathematical model on a priori theoretical ground while the experimental approach combines the theoretical considerations with the empirical observations available and is designed to extract the maximum of information from the available data (Koutsoyiannis 1977). Using the former approach, an equation with several variables was specified in conformity with the research problem and objectives.

The framework for the study has its basis on the Keynesian and endogenous growth models. The Keynesian model states that expansion of government expenditure accelerates economic growth. Although, endogenous growth models do not assign any important role to government in the growth process, authors like Barro (1990), Barro & Sala-i-Martin (1992) and Easterly & Rebelo (1993) emphasized the importance of government (activity) policy in economic growth. Moreover, some authors focused on the components of government expenditure that are productive or unproductive Kneller *et al* 1999), while others submitted that composition of government expenditure might exert more influence compare to the level of government expenditure (Nijkamp & Poot 2004). From the foregoing discussion, the level of government expenditure and composition of government expenditure are important determinants of growth.

Thus, this study model expresses economic growth (GR) as a function of various levels and components of government expenditure that include total capital expenditure (TCAP), total recurrent expenditure (TREC), expenditures on defense (DEF), agriculture (AGR), transport and communication (TRACO), education (EDU) and health (HEA). In addition, we include inflation (INF) and overall government fiscal balance (FISBA), since they can have lasting impact on economic growth. Thus, the growth model is specified as:

$$GR = \alpha_0 + \beta_1 TCAP + \beta_2 TREC + \beta_3 DEF + \beta_4 AGR + \beta_5 TRACO + \beta_6 EDU + \beta_7 HEA + \beta_8 INF + \beta_9 FISBA + \varepsilon$$

…… (1)

The above equation is presented in logarithm form to enable the study standardize all values and interpret the variables coefficient as elasticities as equation 2 below thus:

$$LnGR = \alpha_0 + \beta_1 LnTCAP + \beta_2 LnTREC + \beta_3 LnDEF + \beta_4 LnAGR + \beta_5 LnTRACO + \beta_6 LnEDU + \beta_7 LnHEA + \beta_8 LnINF + \beta_9 LnFISBA + \varepsilon$$

……….. (2)

The variables are measured as follows:

Economic growth here refers to the changes in real GDP. Real GDP in turn is obtained by dividing GDP at current market price by the consumer price index (CPI). TREC is measured as total recurrent expenditure divided by the CPI. TCAP is captured by the total capital expenditure divided by the CPI. DEF is measured as government expenditure on defense divided by CPI. AGR is captured by government expenditure on agriculture divided by CPI. HEA is measured as government expenditure on health divided by CPI. EDU is captured by government expenditure on education divided by CPI. TRACO is measured as government expenditure on transport and communication divided by CPI. FISBA is the overall fiscal balance, while IFN is the inflation rate. U refers to the error term. The various expenditure items used are defined as payments for transactions within one year (in the case recurrent expenditure), and payments for non-financial assets used in the production process for more than one year (in the case of capital expenditure). This process was introduced by the Central Bank of Nigeria (CBN) in 2008.

The choice of the appropriate technique in every research depends on the research problem as well as the study objectives. The above equation have a linear relationship hence Ordinary Least Square (OLS) technique was chosen. OLS is based on the minimization of the sum of squares of the errors.

Economic A Prior Criterion

This shows whether each independent variable in the equation is comparable with the postulations of economic theory. That is, it is the sign and size of the parameters of economic relationships follows the expectation of the economic theory. This must be based on the theoretical framework of the subject matter. For the current study, theory suggests some relationships or effects of some of the variables on economic growth ordinarily referred to as a prior expectation. Total Capital Expenditure, Expenditures on Defense, Agriculture, Transport and Communication, Education and Health expenditures are expected to have positive signs; inflation rate is expected to have a negative sign; while Overall Government Fiscal Balance can be either positive or negative. If estimates of the parameters of the model turn-up with sizes and signs number not in confirmation of economic theory, they should be rejected unless there is a good reason to believe that in that particular instance, economic theory do not hold.

Data and Sources

The study makes use of Secondary data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin 2010. The single source was chosen for uniformity in variables data across the period.

RESULTS, FINDINGS AND DISCUSSIONS

The estimation results as presented in Table 1 below reveals that the explanatory variables jointly account for approximately 58.96 percentage changes in economic growth. The F statistic of 12.585 is significant at 5% level and this shows that the explanatory variables are important determinants of economic growth.

Table 1: Summary of Estimates of the Equation.

Variable	C	Ln TCAP	LnTREC	LnDEF	LnAGR	LnTRACO	LnEDU	LnHEA	LnINF	LnFISBA
Coefficient	58.9	-0.004	-0.003	-0.019	-0.00	0.034	-0.066	0.062	-0.299	-0.0002
t-Statistic	4.156	-2.089	-2.030	-1.018	-0.050	2.658	-2.696	1.693	-1.528	-3.311
R^2		DW	FS	SER						
0.5895		1.960	12.585	1.880						

Source: Authors'

Note: All entrees are not approximated values

The Durbin Watson statistic (1.96) illustrates the absence of serial auto correlation. The estimation results show that the variables total capital expenditure (TCAP), total recurrent expenditure (TREC), expenditures on transport and communication (TRACO), education (EDU), and health (HEA), including inflation (INF) and overall fiscal balance (FISBA) are statistically significant in explaining changes in economic growth. However, expenditures on defense (DEF) and agriculture (AGR) are not significant in explaining economic growth. For instance, 1 percentage increase in total capital expenditure in the previous two year causes economic growth to decline by 0.004 percentages. Similarly, a 1 percentage increase in total recurrent expenditure in the previous one year leads to 0.003 percentage decrease in economic growth. These findings are in line with the one reported by Laudau (1986), Barro (1991), and Folster & Henrekson (2001) that government expenditure may slowdown economic growth.

The insignificance of defense and agriculture is interesting because these tow sectors are important to the economy. First for defense, it is one record that spending in the sector has been higher than other basic sectors like education and healthcare. Figure 1 below presents the trend of government expenditure in defense, education, health and agriculture and it clearly shows that government expenditure in defense was consistently higher than the other selected sectors. In other words, the insignificance contribution of defense to economic growth may be as a result of misplaced priority in the sector. Second, for agriculture it is important that spending here contributes to growth because over 60% of the population of the country is employed in the agricultural sector. Figure 1 below also show that spending in the sector has been minuscule compared to other selected sectors hence its insignificance contribution may be as a result of under spending in the sector.
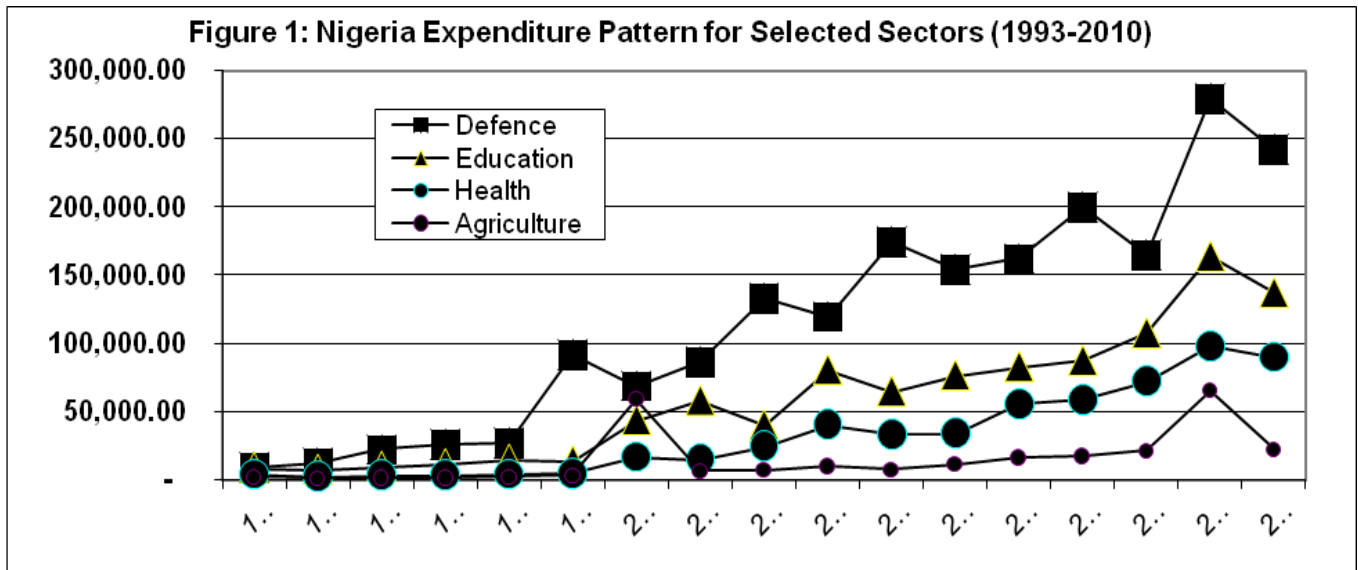
Source: Computed from Central Bank of Nigeria Statistical Bulletin 2010

The negative impact of total capital and recurrent expenditures as well as the insignificance contribution of defense sector may not be unconnected with mismanagement and diversion of public funds by government officials and political appointees. Furthermore, 1 percentage increase on government expenditure on transport and communication in the previous one year results to an increase in economic growth by approximately 0.035 percentage. Thus, higher government expenditure on transport and communication creates an enabling environment for businesses to strive through reduced cost of production. Besides, the estimation shows that a 1 percentage increase in government expenditure on education in the previous one year causes economic growth to decline by approximately 0.07 percentages. This is not surprising because funds meant for the development of the education sector have not been properly utilized and in most cases embezzled, thus precipitating the incessant strike by Academic Staff Union of Universities (ASUU) and National Union of Teachers (NUT).

Moreover, the estimation results indicate that a 1 percentage increase in expenditure on health in the previous one year leads to approximately 0.06 percentage increase in economic growth. Thus, increases in government expenditure on health raise the health status and productivity of the people, thereby promoting economic growth. The regression results also illustrate that any increase in inflation and overall fiscal balance results to a decrease in economic growth.

Conclusion

Following the results reported in the preceding section, the author makes the following recommendations. Firstly, there is need for policy makers to ensure that capital expenditure and recurrent expenditure are properly managed in a manner that it will raise the nation's production capacity and accelerate economic growth. Secondly, policy making should take into account efforts that can increase investment in transport and communication sectors, since it would reduce the cost of doing business as well as raise the profitability of firms. Thirdly, there is need for a boost in the education and health sectors through increased funding, as well as ensuring that the resources are properly managed and used for the development of education and health services. Lastly, efforts should be targeted at the provision of funds for anti-graft or anti-corruption agencies like the Economic and Financial Crime Commission (EFCC), and the Independent Corrupt Practices Commission (ICPC) in order to arrest and penalize those who divert and embezzle public funds.

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