Impact of Government Expenditure on Economic Growth in Nigeria

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ABSTRACT

This study examined the Impact of Government Expenditure on Economic Growth (proxy by gross domestic product) in Nigeria. Secondary time series panel data was collected for the period 1998 to 2017 from the Statistical Bulletin of the Central Bank of Nigeria (CBN). The study employed Ordinary Least Squares (OLS) technique based on the computer software Windows SPSS 23 version for the analysis of data, where Gross Domestic Product (GDP), the dependent variable and proxy for economic growth, was regressed as a function of Inflation rate (IFR) and Interest rate (INTR), the independent variables. The results of the analysis showed that both Inflation rate and Interest rate have no significant effect on Gross Domestic Product on the economic growth in Nigeria. Based on the findings, the study recommended that government should put in place measure to control inflation and also formulate and implement financial policies that enhance investment-friendly rate of interest and take into consideration those other factors which negatively affect investment in the country in order to maintain sustainable economic growth.

KEYWORDS: *Inflation Rate, Interest Rate, Government Expenditure, Economic Growth.*

INTRODUCTION

In almost all economies today, the role of government occupies a position of paramount importance. One reason for this is that it directs the process of achieving a country's macroeconomic objectives such as full employment, economic growth and development, price stability and poverty reduction. Another is the perceived failure of the market system to efficiently and equitably allocate economic resources for social and infrastructural development (Agbonkhese and Asekhome, 2014). Government basically performs two functions: protection and provision of public goods. Protection involves the enforcement of the rule of law and property rights. These functions helps to minimise risk, protect life and property and the nation from both internal and external aggression as well as provide roads, schools, electricity and communication to name a few. Public expenditure is an important instrument for government in controlling the economy. Okoro (2015) defines it as the value of goods and services provided through the public sector.

Economic growth is an important macro-economic objective because it enables improved standard of living and job creation. A fast-rising growth rate not only commands international recognition, it also paves a way for development. Economic growth implies the expansion of a country's productive capacity. It refers to an increase in the amount of goods and services produced in a country over a period of time. Gross Domestic Product (GDP) is considered the broadest economic growth indicator. It represents the market value of all goods and services produced in an economy during a given period usually a year. The relationship between government expenditure and economic growth is particularly important for developing countries. This is due to the need to extract themselves from the jaws of abject poverty and set themselves in the path of rapid development.

Government of developing countries have embarked on various spending programs in order to achieve this goal. Unfortunately, economic theories do not automatically generate strong conclusions about the effect of government expenditure on economic growth. Indeed, it has generated a series of controversy among scholars. Some scholars believe that a rise in government expenditure is necessary for increase in output and can reverse economic downturns. For instance, Agbonkhese and Asekhome (2014), Akpan and Abang (2013) and Okoro (2013) in their different studies of the relationship between government expenditure and economic growth concluded that government expenditure has a positive and significant effect on economic growth. Other scholars are of the opinion that a rise in government expenditure (especially when it is funded by borrowing) may impede economic growth. These include Egbetunde and Fasanya (2013), Folster and Henrekson (2001) who suggested in their work that there is no significant relationship between government expenditure and economic growth. The relationship between government expenditure and economic growth has continued to gather dust over the years. Expenses on social and economic infrastructures such as health, education, roads, telecommunication, schools and electricity usually have a positive impact on national output. But in developing countries, increase in government expenditure usually implies increase in tax or borrowing. This reduces per capita income and the desire to work thus reducing aggregate demand. All these spikes up interest in knowing what influence government expenditure has on economic growth.

Government expenditure on social and economic services (such as health, education, agriculture and infrastructural facilities) raises the productivity of labour, increases profitability of firms and increases national output/income. A rise in government expenditure sometimes culminates in increased tax rate and/or borrowing by the government. The increased tax rate reduces per capita income and may generate a disincentive to work. In the same vein, higher corporate tax increases production costs and reduces the profitability of firms. Most firms lay off workers due to this. Increased borrowing by the government (especially from banks) crowd out private investments and this reduces initiatives and productivity. In Nigeria, available statistics show that federal government expenditure has continued to rise over the years. This is due to receipts from oil and non-oil revenue as well as an increasing demand for public goods such as roads, electricity, education, health and security. Although the Nigerian economy is projected to be growing, the gap between the rich and the poor continues to widen. Hence there is a need to evaluate the relative impact of government expenditure on economic growth in Nigeria.

Several studies have been carried out on this subject. But the review of previous empirical literature reveals a lack of consensus in the research findings of past which indicates the existence of a research gap. This study examined the Impact of Government Expenditure on Economic Growth in Nigeria is an attempt to fill that gap. The study adopted Inflation rate and Interest rate as the independent variable while Gross Domestic Product is the dependent variable and proxy for economic growth. The objective of the study was to examine the impact of the independent variables on the dependent variable. This objective form the basis of the hypotheses tested in this study.

The rest of the paper is structured as follows: section two provides the review of related literatures, while section three deals with the study methodology. The findings of the study and discussion are presented in section four, while section five provides the conclusion and recommendations of the study.

LITERATURE REVIEW

Concept of Government Expenditure

Government expenditures are the costs that are usually incurred by the government for the provision and maintenance of itself as an institution, the economy and society. Government expenditures usually tend to increase with time as the economy becomes large and more developed or as a result of increase in its scope of activities. Ogboru (2010) identified recurrent and capital budget as one of the major types of budget in an economy. It is sometimes referred to as revenue budget and it covers recurrent items or expenditure. The capital budget has to do with expenditures necessary to procure capital assets.

According to Taiwo (2012), government's spending is a fiscal instrument which serves a useful role in the process of controlling inflation, unemployment, depression, balance of payment equilibrium and foreign exchange rate stability. In the period of depression and unemployment, government spending causes aggregate demand to rise and production and supply of goods and services follow the same direction.

As a result of the increase in the supply of goods and services couple with a rise in the aggregate demand exerts a downward pressure on unemployment and depression. In Nigeria, the federal government's expenditures are broadly divided into capital and recurrent expenditure. The recurrent expenditure consists of government expenditure on administration such as wages, salaries, interest on loans, maintenances etc. whereas the capital expenditure are on projects like roads, airport, health, education, electricity generation, telecommunication, water etc. Capital expenditures are investments with multiplier effects on the economy in terms of public benefits. In most cases government intervention has brought stability in income and employment in the economy. Public expenditure is therefore an important tool that brings about egalitarian society through the provision of welfare facilities (Ogba, 1999).

Public expenditure is functionally classified into four (4) categories in Nigeria: administration, economic services, social and community services, and transfers with capital and recurrent expenditure consumptions for each class (CBN, 2011). This paper adopts CBN's definition of government expenditure as a working definition.

Concept of economic growth

Muritala and Taiwo (2011) defined a country economic growth as a long term rise in capacity to supply increasing diverse economic goods to its population, this growth capacity based on advancing technology and the institutional and ideological adjustment that is demand. In other words, economic growth refers to increase in a country's potential Gross Domestic Product (GDP), although this differs depending on how national product has been measured. According to Ogundipe and Oluwatobi (2010), economic growth must be sustained for a developing economy to break the circle of poverty. Economic growth can be defined as the steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income (Todaro and Smith, 2005). However, it is pertinent to note that growth is concerned solely with quantitative and measurable attributes (Ogboru, 2006).

Furthermore, Lipsey and Chrystal (2007) regarded economic growth as the engine for generating long-term increase in the overall standard of living. This justifies why every economy aims at achieving economic growth annually. Economic growth is also defined as the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as a percent rate of increase in real gross domestic product (GDP). (IMF, 2012). This conceptualization by IMF is adopted as the working definition for this paper because real GDP will be used to proxy economic growth.

Jhinghan (2011) stated that economic growth is the quantitative sustained increase in a country's per capita output or income, accompanied by expansion in its labour force, consumption, capital and volume of trade. While economic development is economic growth plus change. An economy can grow but may not develop. However, it is difficult to imagine economic development without economic growth. Though they differ in concept, they are sometimes used interchangeably.

Theoretical Framework

Classical economists believed that government intervention brings more harm than good to an economy and that the private sector through the forces of supply and demand should carry out most of the economic activities. According to the classical dichotomy, an increase in the total amount of money leads to a proportionate increase in all money prices, with no change in the allocation of resources or the level of GDP, which is known as money neutrality. The classical economy has a clear message that except for certain unavoidable responsibilities like national defence, the administration of justice and provision of certain socially necessary institutions such as educational institutions that private interest might neglect, the government ought to stay out of economic sphere. Laissez-faire became the motto and the policy was to leave the economy alone out of the government control (Akor, 2010).

On the other hand, Wagner designed three focal bases for the increase in state expenditure. Firstly, during industrialization process, public sector activity will replace private sector activity and state functions like administrative and protective functions will increase. Secondly, governments needed to provide cultural and welfare services like education, public health, old age pension or retirement insurance, food subsidy, natural disaster aid, environmental protection programs and other welfare functions.

Thirdly, increased industrialization will bring out technological change and large firms that tend to monopolize economic activities. Governments will have to offset these effects by providing social goods through budgetary means. Wagner further pointed out that public spending is an endogenous factor, which is determined by the growth of national income. Hence, it is national income that causes public expenditure. The Wagner's Law tends to be a long-run phenomenon: the longer the time-series, the better the economic interpretations and statistical inferences. It was noted that these trends were to be realized after fifty to hundred years of modern industrial society.

In addition, Peacock and Wiseman (1967) suggested that the growth in public expenditure does not occur in the same way that Wagner theorised. Peacock and Wiseman choose the political propositions instead of the organic state where it is deemed that government like to spend money, people do not like increasing taxation and the population voting for ever-increasing social services.

The Keynesian Perspective on Government Expenditure

Following the 1929-30 Great Depression, the classical economists that opposed government intervention argued that strong trade unions prevented wage flexibility which resulted in high unemployment. The Keynesians, on the other hand, favoured government intervention to correct market failures. In 1936, John Maynard Keynes (1883- 1946) "General Theory of Employment, Interest and Money" criticized the classical economists for putting too much emphasis on the long run. According to Keynes, "we are all dead in the long run". Keynes believed depression needed government intervention as a short term cure. Increasing saving will not help but spending. Government should increase public spending giving individuals, purchasing power and producers would produce more, creating more employment. This is the multiplier effect that shows causality from public expenditure to national income.

Keynes categorized public expenditure as an exogenous variable that can generate economic growth instead of an endogenous phenomenon. Keynes believed the role of government to be crucial as it can avoid depression by increasing aggregate demand and thus, switching on the economy again by the multiplier effects. Government spending is a tool that brings stability in the short run but need to be done cautiously as too much of public expenditure would lead to inflationary situation while too little of it would lead to unemployment. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multiplier. The Keynesian analysis of government expenditure formed the bases for this research.

Empirical Review

This section discussed some related empirical studies on the impact of government expenditures on economic growth in Nigeria. In their study, Oyinlola and Akinnibosun (2013) examined the relationship between public expenditure and economic growth in Nigeria during the period 1970-2009.The study used components of public expenditure such as recurrent expenditure, capital expenditure, administrative expenses, community and social service and transfer. The result also showed the presence of a co-integrating relationship between the variables in the system thus, suggesting that a long term relationship exists between them. Among other studies with similar findings are Nworji, Okwu, Obiwuru, and Nworji, (2012); Oyinlola and Akinnibosun (2013); Tajudeen and Fasanya (2013) Aregbeyan and Akpan (2013) and Akpokerere and Ighoroje (2013).

Gukat (2015), analysed the relationship between government expenditure on human capital and economic growth in Nigeria. Using the error correction mechanism, the study found that public expenditure on human capital has a positive and significant impact on economic growth in Nigeria.

Also, Ohwofasa, Obeh, and Atumah (2012) and Chud and Chude (2013) have investigated the relationship between government expenditure in the education sector and economic growth in Nigeria with similar findings.

Emori. Duke and Nneji (2015) investigated the impact of government expenditure on the Nigerian economy using ADF unit root test and OLS regression test. They found that public expenditure had a significant effect on the Nigerian economy. Ebong, Ogwumike, Udongwo and Ayodele (2016) assessed the impact of government capital expenditures on economic growth in Nigeria. A multiple regression model based on a modified endogenous growth framework was utilized to capture the interrelationships. Drawing on error correction and cointegration specifications, an OLS technique was used to analyse the annual time series. They found that the disaggregated expenditures do not crowd out private investment.

Udoffia and Godson (2016) investigated the impact of federal government expenditure on the Nigerian economy using the OLS estimation technique and found that federal government capital and recurrent expenditure have a positive effect on real GDP. In summary, the empirical studies reviewed on the actual relationship between government expenditure and economic growth is

mixed and inconclusive. Their results and evidence differ by analytical method employed, and categorization of public expenditures. The sampled period for this study (1981-2015) differed significantly from all other studies. This was in order to provide a robust empirical explanation for the impact of government expenditure on economic growth in Nigeria. Therefore, this study is an improvement on the previous studies on economic growth and government expenditure relationship in Nigeria. It considers government spending only in two categories – capital and recurrent expenditure as important variables that affects economic growth. Secondly, it extends the study period to 2015 and finally employed the Error Correction Mechanism (ECM) in the study. Specifically, it is concerned with determining the relative contributions to economic growth in Nigeria of government capital and recurrent expenditures on administration, social and community services and economic services. The importance of disaggregating government expenditure for proper appreciation of the role of the state in the Nigerian economy is being underscored in this study.

METHODOLOGY

This section provides the methodology adopted for the study of the impact of Government Expenditure on Economic Growth in Nigeria. The study adopted a longitudinal research design, using secondary time series panel data for the period 1998-2017. This time period was considered long enough to establish a causality relationship between the study variables, whereas, the availability of data relevant for the study was also a major justification for determining this time period. Data was collected on the study variables (IFR, INTR and GDP) from the Statistical Bulletin of the CBN. The source of data is considered reliable and dependable.

The study adopted the multiple regression analysis with Ordinary Least Square (OLS) econometric technique for data analysis. This technique possesses the unique property of Best Linear Unbiased Estimator (BLUE) as well as the desirable qualities of consistency and efficiency. The statistics tested for the variables in the regression equation include coefficient of determination (C), T-test, F-test and Durbin Watson (DW) statistics. The Statistics Package for Social Sciences (SPSS) 23 for windows was the statistical computer software used to run the analysis. Where, coefficient of determination (R^2) measures the explanatory power of the independent variables on the dependent variable; Student T-test measures the individual significance of the estimated coefficients of the independent variables; F-test tests for the overall statistical significance of the models, which was used to generalize the hypotheses; and the Durbin Watson (DW) statistics test tests for the auto correlation of the variables in the regression equation.

RESEARCH HYPOTHESES

The following hypotheses will be tested:

1. H_0: Inflation Rate has no significant effect on Gross Domestic Product in Nigeria.
2. H_0: Interest Rate has no significant effect on Gross Domestic Product in Nigeria

MODEL SPECIFICATION

To achieve the objectives of this study and test the hypotheses the following regression model was developed to capture the causality relationship between IFR, INTR and GDP.

GDP = *f* (IFR, INTR)

The above model was translated into a specific regression equation as stated below:

$GDP = \beta_0 + \beta_1 (IFR) + \beta_2 (INTR) + e$

Where

GDP = Gross Domestic Product, the dependent Variable and proxy for economic growth.

IFR = Inflation Rate, one of the independent variable.

INTR = Interest Rate, the second independent variable.

β_0 = constant term

β_1, β_2 = coefficients of the independent variables.

e = error term of the equation.

FINDINGS AND DISCUSSION

This study examined the impact of IFR and INTR on GDP, using OLS technique based on the computer software package windows SPSS 23 version. The data so far collected for the study is presented in table 1 below, while the results of the analysis are in table 2.

Table 1: Aggregate annual value of GDP, IFR and INTR from 1998-2017

Year	Independent Variables		Dependent Variable
	Inflation Rate (IFR) %	Interest Rate (INTR) %	Gross Domestic Product (GDP) ₦'Billion
1998	7.9	18.30	4588.990
1999	6.6	21.30	5307.362

2000	6.9	18.00	6897.482
2001	18.9	26.00	8134.142
2002	12.9	20.60	11332.25
2003	14.0	19.60	13301.56
2004	15.0	18.90	17321.30
2005	17.9	17.80	22269.98
2006	8.2	17.30	28662.47
2007	5.4	17.00	32995.38
2008	11.6	15.22	39157.88
2009	12.5	18.60	44285.56
2010	13.7	17.57	54612.26
2011	10.8	15.02	62980.40
2012	12.2	16.02	71713.94
2013	8.5	16.79	80092.56
2014	8.0	16.55	89043.62
2015	9.0	15.90	94144.96
2016	15.7	20.11	101489.50
2017	16.5	20.25	113711.60

Source: CBN Statistical Bulletin 2018

Table 2: Regression result

Dependent variable = GDP

Variable	**Coefficient**	**Std. Error**	**T-statistic**	**Probability**
Constant	142376.398	56778.477	2.508	0.023
IFR	3003.465	2240.941	1.340	0.198
INTR	-7205.408	3496.538	-2.061	0.055
R-squared	0.205	R = 0.453		
Adjusted R-squared	0.112	Pearson Correlation: IFR=0.084, INTR= -0.348		
S.E. of regression	333863.53789			
Sum squared resid	5041176780			
F-statistic	2.198			
Prob(F-statistic)	0.142			
Durbin-Watson stat	0.309			

Sourbce: SPSS 23

Table 2 above shows the summary of the regression results, that is, the correlation between Inflation rate (IFR), Interest rate and Gross Domestic Product (GDP). From the result it is found that Inflation rate with a correlation of 0.084 is positively related to Gross Domestic Product while Interest rate with a correlation of -0.348 is inversely related to Gross Domestic Product which correlation is stronger than Inflation rate with a correlation of 0.084.

The correlation coefficient of the regression is 43.5% which indicates a positive correlation between the dependent variable and the independent variables but not significance since it is not up to 85%.

The coefficient of determination as revealed by R^2 indicates that 20.5% of the variations observed in the dependent variable GDP were explained by variations in the independent variables. This is quite low and reveals the unfortunate reality that only about 20.5% of variations in economic growth are accounted for by the explanatory variables. The adjusted R^2 calculated shows that 11.2% of changes in the dependent variable are accounted for the change in the independent variable. The calculated Durbin-Watson value of 0.309 which is less than 2 which shows that there is a serial or autocorrelation.

Inflation rate have a probability of 0.198 which is greater than the critical value of 0.05, this means that Inflation Rate has no significant effect on Gross Domestic Product on the economic growth in Nigeria. Interest rate have t-statistic of a probability of 0.055 which is also greater than the critical value of 0.05 which mean that Interest has no significant effect on Gross Domestic Product on the economic growth in Nigeria, therefore we accept both hypotheses.

The result of the OLS Regression test shows a negative relationship between inflation, interest rate and Gross Domestic Product.

CONCLUSION

This study examines the Impact of Government Expenditure on Economic Growth in Nigeria over the period of 1998-2017.

The study concludes that inflation and interest rate have negative effect on economic growth in Nigeria. This indicates that the control measures for inflation control are not sustainable and the interest rate trend is unstable. Nigeria as a developing nation should aim to maintain a single digit inflation rate with sustainable control measures and a stable interest rate trend. A strong economy will attract foreign investors to collaborate with the government to grow and develop the economy. But this cannot be achieved in the face of a negative inflation and interest rate relationship with economic growth.

RECOMMENDATION

Government should focus on maintaining inflation at a low rate (single digit). This could imply any fluctuation in Nigeria's general price level would have a significant impact on economic growth.

Government should ensure interest rate stability, formulate and implement financial policies that enhance investment-friendly rate of interest and take into consideration those other factors which negatively affect investment in the country in order to maintain sustainable economic growth.

Moreso, there should be stability in inflation rate and interest rate in order to boost the economic growth in Nigeria.

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