



## **Expenditure Pattern and Economic Growth in Nigeria from 1990 to 2014**

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### **ABSTRACT**

This study empirically examines the relationship between expenditure pattern and economic growth in Nigeria from 1990 to 2014. To achieve this objective, secondary data were collected from annual reports of Central Bank of Nigeria (CBN), Nigerian Capital Market (NCM) and Millennium Development Goal Centre (MDGC). The data collected were analyzed using regression analysis with the aid of Statistical package for Social Sciences (SPSS) version 20. The results indicate that a coefficient (R) of 0.632 and 0.589 respectively for the hypotheses. These justified an existence of positive and moderating relationship between government expenditure pattern and economic growth in Nigeria. Also, the test of significance showed that the relationship is significant with t-cal (3.92) and (3.50) comparatively higher than t-tab (2.06). This presents statistical evidence to reject the null hypotheses and accept the alternate. Hence we recommend that government expenditure pattern be sustained to the extent of sustaining the economic growth of Nigeria.

**Keywords:** Government Expenditure, Economic Growth, Capital, Recurrent, Gross Domestic Product.

### **INTRODUCTION**

Economic growth had often been underlined among conventional indicators or portrait of economic performance as an object of concern. Its natural characteristics of disclosing the changes in an economy had prevalently attracted the attention of the government, analysts and other viewers of economic affairs to its results. Dwivedi (2002) succinctly defined economic growth as a sustained increase in per capita national output or net national product over a long period of time. Ogbonna and Appali (2012) added that to measure economic growth, economists generally examines the rate of change in the real GDP from one year to the next. Similarly, Central Bank of Nigeria (2008) stated that Gross Domestic Product (GDP) is the money value of goods and services produced in an economy during a period of time irrespective of the nationality of the people who produced the goods and services. This accounts for why GDP had often resounded in discussion floor of economic analysts and policy formulators. It displays the basic scores of the economic output, performance or micro-economic objectives.

In a bid to actualise the predetermined macro-economic objectives or performance of an economy, the government of Nigeria had consciously resorted to various economic oriented programmes, agenda and policy adjustment. Such policies include; monetary and fiscal policies. Arthur in Jbingan and Stephen (2004) noted that fiscal policy avails government the opportunity to use its expenditure and revenue programmes to produce desirable effects and avoid undesirable

effects on the national income, production and employment. The fiscal policy's instruments are usually government expenditure adjustment and taxation; but expenditure is the variable under consideration. Chude and Chude (2013) argued that government can adjust expenditure to reverse economic downturns by borrowing money from the private sector and then return back the money to the private sector through various spending programmes. This is traceable to the economic contraction and expansion attempt of government by the sales and purchase of treasury bills among other financial instruments. Moglebe et al (2012), classified government spending as recurrent and capital expenditure. The recurrent spending includes; wages, salaries, overhead cost, consumables for all services, while capital expenditure includes spending on infrastructures, social amenities like health, education, telecommunication etc. These expenditures are estimated in annual budget for governing primary functions and promoting conducive atmosphere for investments to grow the economy.

Barro (1990) observed that some studies were carried out with diverse opinion on the impact of government expenditure pattern on economic growth. Hence, the aim of this study is to empirically examine the relationship between government expenditure pattern and economic growth in Nigeria. To carry on with this study, these questions are put forward: to what extent do recurrent and capital expenditure impact on real gross domestic product (GDP)? In order to achieve the aim of the study, the work had been organised in five sections. The second session focused on the review of related literature. The second session treated the methodology adopted for the study. The fourth session disclosed the analysis of data and test of two hypotheses which are: there is no significant relationship between capital expenditure and real gross domestic product as well as there is no significant recurrent expenditure and real gross domestic product. The last session discussed findings; conclusion and relevant recommendations were made.

#### **Review of Related Literature/ Theoretical Framework**

The study was hinged on Adolf Wagner's hypothesis or theory. In his study titled: 'law of increase of the state activities'. The German economist submits that there is a positive and direct relationship between economic growth and public expenditure. Wagner in Mutiu and Olusijibomi (2013) observed a fundamental cause and effect relationship between the variables such that an increase in the expenditure scope of government cause increase in the economic performance. Similarly, Peacock and Wiseman (19(11) applied the Wagner's hypothesis in United Kingdom economy and found that it was valid. From their viewpoint, it is acceptable that governments expand its expenditure pattern not in the few traditional functions of defence, protecting lives and properties overhead cost of salaries and wages etc. But in new infrastructural projects of roads, electricity, health, education, telecommunication, industrialisation, social services, etc that results in favourable atmosphere for business to thrive, employment and productivity to be enhanced while economy grows.

Therefore, this theory is adopted in the study of the Nigerian public expenditure and economic growth. A historical trail of government functions and budgetary records had often portrayed increase in estimated expenditure figures, so its resultant impact on the economy is worth knowing.

#### **Conceptual Framework**

Government expenditure is also known as public expenditure. Public expenditure refers to the expense which government incurs in the performance of its operation (Lean, 2006). According to Nwaeze, Njoku and Nwaeze (2014), public expenditure could be broadly classified into recurrent expenditure and capital expenditure. Recurrent expenditures are monies spent on government regular functions, such as: salaries from employees, administrators, running of essential services, maintenance of infrastructural facilities and other related activities. Capital expenditure is concerned with expenses on acquisition of things in permanent nature, such as; buildings, construction of roads, bridges and other related projects (Nwaeze, 2010). Abu and Abdullahi

(2010) observed that some scholars argue that increase in government expenditure pattern had positive impact on socio-economic growth. However, some did not support this claim. Government expenditure in its classification as recurrent and classical expenditure is the independent variable of this study. On this note, recurrent expenditure and capital expenditure are used as proxies for government expenditure.

### **Economic Growth**

Generally, economic growth is seen as an increase in a country's potential GDP. Dwivedi (2002) posits that economic growth means a sustained increase in per capita national output or net national product over a long period of time. Ogbonna and Appah (2012) added that to measure economic growth, economists generally examine the rate of change in real GDP from one year to the next. According to Central Bank of Nigeria (2008), Gross Domestic Product (GDP) is the monetary value of goods and services in an economy during a period of time irrespective of the nationality of the people who produced the goods and services. This implies that one can ascertain the basic economic performance level if the GDP is in view. However, real gross domestic product (RGDP) is the outcome after inflationary factor had been considered.

In examining the relationship between the government expenditure pattern and economic growth in Nigeria, real GDP of the country is adopted as appropriate proxy for measuring economic growth.

### **Empirical Review**

Studies abound on the relationship between government expenditure and economic growth. Unfortunately, the findings set a floor for critical argument. Some researchers concluded that the relationship between the variables is positive and others claimed otherwise. A good number are shown below.

Nwaeze, Njoku and Nwaeze (2014), examined the nature and impact of federal government expenditure on Nigeria's economic growth for the period of 1992-2011. Secondary data were collected and ordinary **least** square regression was adopted to test the hypothesis. The result showed that federal government expenditure has a positive but insignificant impact on the economic growth of Nigeria under the period in the study, Mutlu and Olusijibomi (2013), studied the relationship between public expenditure and economic growth in Nigeria during the period of 1970-2009. Secondary data were collected and analysed. The **Stranger** Causality Test was carried out and result showed that the increased public expenditure granger cause economic growth.

Abu and Abdulahi (2010), carried out a study on government expenditure and economic growth in Nigeria from 1970-2008; a disaggregated analysis. Secondary data were collected and analysis was done using the regression technique. The result showed that government total capital expenditure, total recurrent expenditure and expenditure on education have a negative effect on economic growth. But government expenditure on transportation, communication and health results to an increase in economic growth.

Modebe et al (2012), investigated the impact of recurrent and capital expenditure on the Nigerian's economic growth from 1987-2010. Secondary data were collected and analysed using the disaggregated method with regression technique. The findings revealed that recurrent expenditure had a positive and non significant impact on the economic growth of Nigeria.

Louis (2012) evaluated the direction of the relationship between government expenditure and economic growth in Nigeria from 1961 to 2009. Secondary data were collected and analysed by econometric methodology. From a Granger causality test, the result indicated that total recurrent expenditure granger caused economic growth implying that government expenditure promotes growth.

Abdullahi (2000) ascertained the relationship between government expenditure and economic growth in Nigeria. Through the use of secondary data and regression analysis, he submitted that

capital expenditure has a significant negative association with growth of real GDP per capita. However, the recurrent expenditure indicated a positive result Nwoji et al (2012) empirically looked at the effect of public expenditure on economic growth in Nigeria from the period of 1970-2007. Secondary data were collected from CBN and analysed with the ordinary least square regression technique. The result showed that capital and recurrent expenditure had insignificant negative effect on economic growth during the study period.

Robinson, Eravwoke and Ukavwe (2014) assessed the relationship between government expenditure and economic growth for the period 1984-2010 in Nigeria. Secondary data were collected for the study. Ordinary least square regression was used to examine the short run impact while the Augmented Dickey Fuller test was used for the long run. The result revealed that there is an inverse relationship with government expenditure on health and economic growth, while government expenditure on education sector was seen to be insufficient to impact on the sector in Nigeria.

Uger (2013) undertook a critical study on the impact of federal government expenditure on the agricultural sector in Nigeria from the period of 1991-2010. Data were sourced from Central Bank of Nigeria. Simple regression was used to analyse the data. The result showed a weak relationship between the government expenditure and output of the agricultural sector. Thus, the researcher attributed to inadequate funding.

From the empirical studies reviewed it is observed that all the works in our best of knowledge had confined the time series analysis period to 2011 or less. Therefore, the remarked gap in literature which this study filled was the outcome of a more comprehensive coverage in period of time series analysis from 1990-2014. This resulted in better view perspective of the current relationship between government expenditure pattern and economic growth in Nigeria. Besides, it aid to justify or refute the earlier standpoints in literature.

## **METHODOLOGY**

### **Data Nature and Source**

Time series secondary data were collected from the central bank of Nigeria Statistics Bulletin, Nigeria Capital Market Bulletin and Millennium Development Goal Centre, 1994-2013. The data covers real gross domestic product (RGDP), capital expenditure (CE) and recurrent expenditure (RE) for the period under study. Ordinary least square (OLS) technique was adopted with the aid of Statistical Package for Social Sciences (SPSS) for the study.

### **Model Specification**

The model specified that economic growth in Nigeria(Y) depends on Government expenditure (X) which is thus: (Nwoji et al, 2012; Robinson, Eravwoke and Ukavwe, 2014).

$$RGDP = b_0 + b_1CE + e_1 \quad (2)$$

$$RGDP = b_0 + b_2RE + e_2 \quad (3)$$

Where:

Y = dependent variable (RGDP)

X = independent variable (CE,RE)

RGDP = real gross domestic product

CE = capital expenditure

RE = recurrent expenditure

= constant or intercept of regression

bi or b = coefficient or slope of regression e or e = stochastic variables or error term

**EMPIRICAL RESULTS AND DISCUSSION**

**Table: 1 Record of the Relevant Data from CBN and NCMB**

Year	Real Gross Domestic Product(RGDP)	Capital Expenditure(CE)	Recurrent Expenditure(RE)
1990	267.5	6.66	13.39
1991	265.4	11.15	15.87
1992	271.4	16.28	20.78
1993	274.8	14.38	29.80
1994	275.5	18.14	37.77
1995	281.4	24.74	53.15
1996	293.7	29.16	54.83
1997	302.0	33.73	58.96
1998	310.9	68.65	75.12
1999	312.2	60.43	102.69
2000	329.2	158.90	196.78
2001	357.0	235.24	294.71
2002	433.2	283.47	424.20
2003	477.5	324.02	545.31
2004	527.6	412.93	556.81
2005	561.9	514.72	789.13
2006	595.8	583.98	894.32
2007	634.3	854.79	1217.43
2008	718.9	1455.70	1505.63
2009	718.9	1284.16	1426.06
2010	775.5	1522.40	1648.40
2011	33994.6	1375.20	2055.80
2012	40544.1	1965.20	1664.40
2013	44103.9	1890.41	1948.43
2014	00000.0	1862.52	2120.48

Source: CBN, Nigeria Capital Market

**Data Analysis**

H<sub>01</sub>: There is no significant relationship between Capital Expenditure and Real Gross Domestic Product in Nigeria.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	CE <sup>b</sup>		Enter

a. Dependent Variable: RGDP

b. All requested variables entered.

Model	R	R Square	Adjusted R Square	Durbin-Watson	F Change	Durbin-Watson
				R Square Change		
1	.632 <sup>a</sup>	.400	.374	.400	15.334	1.316

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1639072133.282	1	1639072133.282	15.334	.001 <sup>b</sup>
	Residual	2458446424.965	23	106888974.998		
	Total	4097518558.246	24			

a. Dependent Variable: RGDP

b. Predictors: (Constant), CE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2012.519	2753.049		-.731	.472
	CE	11.857	3.028	.632	3.916	.001

a. Dependent Variable: RGDP

**Discussion of Empirical Results**

The result of the test of hypothesis indicates that there is positive relationship between capital expenditure and real gross domestic product in Nigeria. This is statistically justified with the coefficient of the explanatory variable showing a 0.632. By this, the beta at 63% implied that such level of change in real gross domestic product is directly explainable by the change in capital expenditure. Owing to that we can deduce that the deviation of 27% in the real gross domestic product in Nigeria could be attributed to stochastic error term. Further result of the relationship was shown at 5% level of significance. With a test of significance (i.e. t-statistic) at t-cal 3.916 and t-tab 2.06, it implied that that relationship between the variables is significant; hence we have statistical evidence to reject the null hypothesis, since the t-cal is higher than the t-tab.

1102: There is no significant relationship between Recurrent Expenditure and Real Gross Domestic Product in Nigeria.

**Variables Entered/Removed<sup>a</sup>**

Mode	Variables Entered	Variables Removed	Method
1	RE <sup>b</sup>		Enter

a. Dependent Variable: RGDP

b. All requested variables entered.

Model	R	R Square	Adjusted R Square	Durbin-Watson	F Change	Durbin-Watson
				R Square Change		
1	.589 <sup>a</sup>	.347	.319	.347	12.238	1.157

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1423037772.650	1	1423037772.650	12.238	.002 <sup>b</sup>
	Residual	2674480785.596	23	116281773.287		
	Total	4097518558.246	24			

a. Dependent Variable: RGDP

b. Predictors: (Constant), RE

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2170.935	2996.204		-.725	.476
RE	10.248	2.929	.589	3.498	.002

a. Dependent Variable: RGDP

### Discussion of Empirical Results

The result of the test of hypothesis indicates that there is positive relationship between the recurrent expenditure and real gross domestic product in Nigeria. This is statistically justified with the coefficient of the explanatory variable showing a 0.589. By this, the beta at 59% implied that such level of change in real gross domestic product is directly explainable by the change in recurrent expenditure. Considering that fact, we can submit that the deviation of 41% in the real gross domestic product in Nigeria could be attributed to stochastic error term. Besides, the extent of the relationship was shown at 5% level of significance. With a test of significance (ie t-statistic) at t-cal 3.498 and t-tab 2.06, it implied that the relationship between the variables is significant therefore we have statistical evidence to reject the null hypothesis, since t-cal is higher than the t-tab.

### CONCLUSION AND RECOMMENDATIONS

The result of the first hypothesis apparently demonstrated that there is a positive and significant relationship between the capital expenditure and real gross domestic product in Nigeria. It empirically implied that the government expenditure on infrastructural facilities and projects such as road network, bridges, education, health, security, telecommunication, industrialization etc, effectively impact on the economic performance of V Nigeria. Obviously, the findings of study do not conform to the claims of (Abdullahi, 2000; Modebe et al, 2012; Nworji et al, 2012; Uger, 2013; Robinson, Eraywoke & Ukavwoke, 2014). Hence, we recommend that adequate government capital expenditure in diverse, sectors be sustained to promote and sustain good economic performance.

Similarly, the result of the second hypothesis clearly justified that 59% of changes in the real gross domestic product are explainable in the changes of the recurrent expenditure in Nigeria. This direct relationship lent credence to the fact that government expenses on employee remuneration, administration, overhead costs and related bills translates into enhanced economic growth. It tends to support the view that when the labour force is remunerated, productivity is not only secure but incessant workforce strike is forestalled to promote the economic result. The findings of this study undoubtedly agreed with the standpoint of (Louis, 2012; Mutui & Olusijibomi, 2013). It therefore recommended that consistent effort be directed towards sustaining recurrent expenditure that would sustain the growth of economy in Nigeria.

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