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PUBLIC EXPENDITURE AND ECONOMIC DEVELOPMENT IN NIGERIA – A TIME SERIAL STUDY (1980 – 2012)

NWADIUBU, ANTHONY[1], ONWUKA IFEANYI ONUKA[2]

[1]Department of Banking & Finance, Caritas University Amorji Nike, Enugu State, Nigeria
[2]Department of Banking & Finance, Godfrey Okoye University, Ugwuomu Nike, Enugu State, Nigeria

Abstract

The literature on the impact of government expenditure on economic growth has mixed results in both country and cross-country studies. The increasing government expenditure in Nigeria over the years has agitated the minds of researchers as to the impact of these expenditures on economic growth. In an attempt to investigate the effect of government expenditure on economic growth, we employed a disaggregated analysis. The results reveal that government total capital expenditure (TCAP), total recurrent expenditures (TREC), and government expenditure on education (EDU) have negative effect on economic growth. On the contrary, rising government expenditure on transport and communication (TRACO), and health (HEA) results to an increase in economic growth. The study therefore, recommends that Government should increase both capital and recurrent expenditure, including expenditures on education, as well as ensuring that funds meant for the development of these sectors are properly managed. Moreover, the study insists that government should increase its investment in the development of transport and communication, as well as creating an enabling macroeconomic environment for business to strive. Furthermore, government should raise its expenditure in the development of the health sector since it would enhance labour productivity and economic growth. Finally, the study recommends that government should encourage and increase the funding of anti-corruption agencies in order to tackle the high level of corruption in our public offices and institutions.

Key Words: Public Expenditure, Economic Development, Time Serial Study

1. INTRODUCTION

The taxonomy established by Wagner and Keynes on the role of government expenditure on economic growth has continued to elicit empirical studies on the subject with diverse and conflicting outcomes (Niloy, Emranul & Denise, 2003). According to the Wagner's model government expenditures are endogenous to economic development. While Keynes and his supporters are of the view that public expenditure is the real tool to boost the economic activities (Eugen & Skinner, 1992). Using Nigeria as a case study, the expenditure of government has continued to rise over the years due principally to increasing demand for public utilities like roads, communication, power supply, education, defense and health. Available statistics show that total government expenditure (capital and recurrent) and its components have continued to rise in the last three decades. 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,

Correspondence: Onwuka Ifeanyi Onuka Department of Banking & Finance, Godfrey Okoye University, Ugwuomu Nike, Enugu State, Nigeria. cool4nationale@gmail.com

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. 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 2012 (see Table 1 in appendix for details of government expenditure for the years under review).

This huge government expenditure has been supported largely by equally huge receipts of foreign exchange from sale of crude oil and proceeds from royalties. Unfortunately, rising government expenditure has not translated to meaningful growth and development, as Nigeria still rank among the poorest countries in the world in various development indicators. Couple with this, is dilapidated infrastructure (especially roads and power supply) that has led to the collapse of many industries, leading to 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 couple of years (CBN, 2012). Many Nigerians have continued to wallow in abject poverty, while more than 50 percent live on less than US$2 per day (World Bank, 2012). As observed by Olugbenga and Owoye (2012:13), "inspite of huge government expenditure that have been devoted to enhance economic growth by successive governments; no noticeable success has been achieved since economic growth situation in Nigeria still remain very low".

It is against this background that this study set out to empirically investigate the impact of government expenditure on economic growth in Nigeria for the period 1980 – 2012. The rest of the paper is organized as follows. Following this introduction, Section 2 will briefly review the literature on government expenditure and economic growth while Section 3 consists of methodology and model estimation used in the study. Section 4 will present and discuss the result of the study while Section 5 will conclude the paper with some recommendations.

REVIEW OF RELATED LITERATURE

According to Abdulla (2000), government performs two important functions - protection (security) and provisions of certain public goods. 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, etc. Some scholars argue that increase in government expenditure on socio-economic and physical infrastructures encourages economic growth (see Ram, 1986; and Abu-Bader & Abu-Qarm, 2003). 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 Abdullah (2000); Al-Yousif (2000); Ranjan and Sharma (2008) and Cooray (2009) concluded that expansion of government expenditure contributes positively to economic growth.

However, some scholars did not support the claim that increasing government expenditure promotes economic growth, instead they assert that higher government expenditure may slowdown overall performance of the economy. For instance, in an attempt to finance rising expenditure, government may increase taxes and/or borrowing. Higher income tax discourages individual from working for long hours or even searching for jobs. This in turn reduces income and aggregate demand. In the same vein, higher profit tax tends to increase production costs and reduce investment expenditure as well as profitability of firms. Moreover, if government increases borrowing (especially from the banks) in order to finance its expenditure, it will compete (crowds-out) with the private sector, thus reducing private investment.

Furthermore, in a bid to score cheap popularity and ensure that they continue to remain

in power, politicians and governments officials sometimes increase expenditure and investment in unproductive projects or in goods that the private sector can produce more efficiently. Thus, government activity sometimes produces misallocation of resources and impedes the growth of national output. In fact, studies by Laudan (1986), Barro (1991), Eugen and Skinner (1992); Folster and Henrekson (2001) suggested that large government expenditure has negative impact on economic growth.

In line with this, Barro and Martan (1992); Easterly and Rebelo (1993) and Brons et al., (1999), emphasized that government activity influences the direction of economic growth. Similarly, Dar and Amir Khali (2002) pointed out that in the endogenous growth models, fiscal policy is very crucial in predicting future economic growth.

It should be noted that many studies have attempted to examine the effect of government expenditure on economic growth. For instance, Laudan (1993) examined the effect of government (consumption) expenditure on economic growth for a sample of 96 countries, and discovered a negative effect of government expenditure on growth of real output. Komain and Brahmasrene (2007) examined the association between government expenditures and economic growth in Thailand, by employing the Granger causality test. The results revealed that government expenditures and economic growth are not co-integrated. Moreover, the results indicated a unidirectional relationship, as causality runs from government expenditures to growth. The results illustrated a significant positive effect of government spending on economic growth. Olugbenga and Owoye (2007) investigated the relationships between government expenditure and economic growth for a group of 30 OECD countries during the period 1970-2005. The regression results showed the existence of a long-run relationship between government expenditure and economic growth. In addition, the authors observed a unidirectional causality from government expenditure to growth for 16 out of the countries, thus supporting the Keynesian hypothesis. However, causality runs from economic growth to government expenditure in 10 out of the countries, confirming the Wagner's law. The authors found the existence of feedback relationship between government expenditure and economic growth for a group of four countries.

Folster and Henrekson (2001) in their paper examined the relationship between government expenditure and economic growth for a sample of wealthy countries for 1970-95 periods, using various econometric approaches. The authors submitted that more meaningful (robust) results are generated, as econometric problems are addressed. In India, Ranjan and Sharma (2008) examined the effect of government development expenditure on economic growth during the period 1950-2007. The authors discovered a significant positive impact of government expenditure on economic growth. They also reported the existence of cointegration among the variables. Al-Yousif (2000) indicated that government spending has a positive relationship with economic growth in Saudi Arabia. On his part, Ram (1986) examined the linkage between government expenditure and economic growth for a group of 115 countries during the period 1950-1980. The author used both cross section, time series data in his analysis, and confirmed a positive influence of government expenditure on economic growth.

Cooray (2009) used an econometric model that takes government expenditure and quality of governance into consideration, in a cross-sectional study that includes 71 countries. The results revealed that both the size and quality of the government are associated with economic growth. Abu-Baden and Abu-Qarn (2003) employed multivariate co-integration and variance decomposition approach to examine the causal relationship between government expenditures and economic growth for Egypt, Israel, and Syria. In the bivariate framework, the authors observed a bi-directional (feedback) and long run negative relationships between government spending and economic growth. Moreover, the causality test within the trivariate framework (that include share of government civilian expenditures in GDP, military burden, and economic growth) illustrated that military burden has a negative impact on economic growth in all the countries. Furthermore, civilian government expenditures have positive

effect on economic growth for both Israel and Egypt.

Liu et al. (2008) examined the causal relationship between GDP and public expenditure for the US data during the period 1947- 2002. The causality results revealed that total government expenditure causes growth of GDP. On the other hand, growth of GDP does not cause expansion of government expenditure. Moreover, the estimation results indicated that public expenditure raises the US economic growth. The authors concluded that, judging from the causality test that government expenditure positively influences economic growth. They noted that Keynesian hypothesis exerts more influence than the Wagner's law in US.

Loizides and Vamvoukas (2005) employed the trivariate causality test to examine the relationship between government expenditure and economic growth, using data set on Greece, United Kingdom and Ireland. The authors found that government expenditure size granger causes economic growth in all the countries they studied. The finding was true for Ireland and the United Kingdom both in the long run and short run. The results also indicated that economic growth granger causes public expenditure for Greece and United Kingdom, when inflation is included.

Gregoriou and Ghosa (2007) used the heterogeneous panel to investigate the impact of government expenditure on economic growth. The authors employed the GMM technique, and discovered that countries with large government expenditure tend to experience higher growth, but the effect varies from one country to another. In Saudi Arabia, Abdullah (2000) analyzed the relationship between government expenditure and economic growth. The author reported that the size of government is very important in the performance of economy. He advised that government should increase its spending on infrastructure, social and economic activities. In addition, government should encourage and support the private sector to accelerate economic growth. Donald and Shaunglin (1993) investigated the differential effects of various forms of expenditures on economic growth for a sample of 58 countries. Their findings indicated that government expenditures on education and defense have positive influence on economic growth, while expenditure on welfare has insignificant negative impact on economic growth.

Niloy et al. (2003) used a disaggregated approach to investigate the impact of public expenditure on economic growth for 30 developing countries in 1970s and 1980s. The authors confirmed that government capital expenditure in GDP has a significant positive association with economic growth, but the share of government current expenditure in GDP was shown to be insignificant in explaining economic growth. At the sectoral level, government investment and expenditure on education are the only variables that had significant effect on economic growth, especially when budget constraint and omitted variables are included.

Erkan (2008) examined the relationship between government expenditure and economic growth, by proposing a new framework for New Zealand. The empirical results showed that higher government expenditure does not hurt consumption, but instead raises private investment that in turn accelerates economic growth. Mitchell (2005) argued that the American government expenditure has grown too much in the last couple of years and has contributed to the negative growth. The author suggested that government should cut its spending, particularly on projects/programmes that generate least benefits or impose highest costs. In Sweden, Peter (2003) examined the effects of government expenditure on economic growth during 1960-2001 periods. The author emphasized that government spends too much and it might slowdown economic growth.

Devarajan et al. (2006) studied the relationship between the composition of government expenditure and economic growth for a group of developing countries. The regression results illustrated that capital expenditure has a significant negative association with growth of real GDP per capita. However, the results showed that recurrent expenditure is positively related to real GDP per capita.

For Nigeria, many studies have also attempted to examine government expenditure-economic growth relationship. For example, Oyinlola (1993) examined the relationship between the Nigeria's defense sector and economic development, and reported a positive impact of

defense expenditure on economic growth. Fajingbesi and Odusola (1999) empirically investigated the relationship between government expenditure and economic growth in Nigeria. The econometric results indicated that real government capital expenditure has a significant positive influence on real output. However, the results showed that real government recurrent expenditure affects growth only by little.

Moreover, a study by Ogiogio (1995) revealed a long-term relationship between government expenditure and economic growth. The study showed that recurrent expenditure exerts more influence than capital expenditure on growth. Akpan (2005) used a disaggregated approach to determine the components (that include capital, recurrent, administrative, economic service, social and community service, and transfers) of government expenditure that enhances growth, and those that do not. The author concluded that there was no significant association between most components of government expenditure and economic growth in Nigeria.

Our present study seeks to contribute to the empirical literature by using more disaggregated components of government expenditure in a growth model of Nigeria for the period 1980 - 2012.

METHODOLOGY

Framework for the Model

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 and Sala-Martan (1992) and Easterly and 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 the composition of government expenditure might exert more influence compared to the level of government expenditure (Nijkamp & Port, 2004).

It seems obvious that the level of government expenditure and composition of government expenditure are important determinants of growth. Thus, the growth model following Chiawa et al. (2012) is specified in econometric form as:

$$Grt = \beta_o + \beta_1 TREC + \beta_2 TCAP + \beta_3 DEF + \beta_4 AGR + \beta_5 EDU + \beta_6 HEA + \beta_7 TRACO + \beta_8 FISBA + \beta_9 IFN + U_t \ldots\ldots(1)$$

The variables are measured as follows:

Grt = Economic growth (This 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 = Total recurrent expenditure divided by the CPI.

TCAP = Total capital expenditure divided by the CPI.

DEF = Government expenditure on defense divided by CPI.

AGR = Government expenditure on agriculture divided by CPI.

HEA = Government expenditure on health divided by CPI.

EDU = Government expenditure on education divided by CPI.

TRACO = Government expenditure on transport and communication divided by CPI.

FISBA = Overall fiscal balance

IFN = Inflation rate

U = refers to the error term.

The various expenditure items used are defined by the Central Bank of Nigeria (2011) 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 recurrent expenditure). Thus, we assumed the expenditure items to be actual expenditures.

ESTIMATION PROCEDURE

The estimation procedure adopted in this study is in three sequences as follows:

First, to stem the problem of spurious regression, it is important that the time series properties of the data set employed in estimation of the equations is ascertained. A series X_t is said to be integrated of order d denoted by $X_t \sim I(d)$ if it becomes stationary after differencing d times and thus X_t contains d unit roots and a series which is

I(0) is said to be stationary (Anwer & Sampath,1997). To determine whether a series is stationary or non stationary, unit root test developed by Fuller (1976) and Dickey and Fuller (1981) is used. The Augmented Dickey Fuller test (ADF) is based on the estimation of the following regression.

$\Delta X_t = a_0 + a_1 t + a_2 X_{t-1} + \Sigma k_{i=1} \Delta \alpha_i X_{t-i} + e_t$…… (2)

where Δ is the first difference operator, t is the linear time trend and e_t is the error term. In equation (2) the null hypothesis H_0: $\alpha_2 = 0$ against the alternative hypothesis H_1: $\alpha_2 \neq 0$ is tested by comparing the calculated t-ratio in absolute term with the critical value from table. If calculated t-ratio is less than the critical t value, then the null hypothesis of unit root (non-stationarity) is rejected, in which case the level of time series X_t is characterized as integrated of order zero i.e. I (0). But if it is observed that the individual time series in equation (2) are integrated of order one, I(1), then the series is said to be non-stationary. The Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) unit root tests are employed to test the integration level and the possible co-integration among the variables (Dickey and Fuller, 1981; Phillips and Perron, 1988). Phillips and Perron (1988) developed a number of unit root tests that have become popular in the analysis of financial time series. The Phillips-Perron (PP) unit root tests differ from the ADF tests mainly in how they deal with serial correlation and heteroskedasticity in the errors. In particular, where the ADF tests use a parametric auto regression to approximate the ARMA structure of the errors in the test regression, the PP tests ignore any serial correlation in the test regression. The test regression for the PP tests is:

$\Delta y_t = \beta' D_t + \pi y_{t-1} + u_t$…….. (3)

where u_t is I(0) and may be heteroskedastic. The PP tests correct for any serial correlation and heteroskedasticity in the errors u_t of the test regression by directly modifying the test statistics.

Secondly, we investigate for cointegration among the series. If the variables are integrated of the same order, we apply the Johansen –Juselius (1990, 1992, and 1994) maximum likelihood method of cointegration to obtain the number of cointegrating vector(s). A set of variables is said to be cointegrated if a linear combination of their individual integrated series I(d) is stationary. Generally stated, two variables are said to be cointegrated if they have a common stochastic trend, that is, if they move together for a long period of time. More formally put, a set of variables that are stationary in their first differences but non-stationary in their levels are said to be cointegrated if there exists a stationary linear combination between them.

Thirdly, if the series are found cointegrated, then we construct standard Granger causality tests by augmenting with an appropriate error correction term derived from the cointegration equation. The concept of causality due to Granger (1969) is appropriate and used by most of the studies for testing the relationship between economic growth and government expenditure. According to the Granger causality approach, a variable Y is caused by X , if Y can be predicted better from past values of Y and X than from past values of Y alone (Anwer and Sampath, 1997).

According to Granger (1988), causality within the framework of the VEC model can occur in two different ways. The first way is through the impact of the lagged differences of a right-hand-side variable. The second way is through the error correction term, which is a function of the one-period lagged values of the variables. Granger suggested that the impact of the lagged differences of a right-hand-side variable on the left-hand-side variable captures the short-run dynamics of the system and therefore can be interpreted as short-run causality. The impact of the one-period lagged error correction term on the left-hand-side variable captures the extent that the variables are out of equilibrium; thus, it can be interpreted as long-run causality. There are four possible scenarios of causality as: (a) unidirectional causality running from X to Y; (b) unidirectional causality running from Y to X; (c) feedback or bi-directional causality running in both directions; and (d) no causality.

PRESENTATION AND DISCUSSION OF RESULTS

Table 2 - Results of Stationarity (Unit Root) Test Result of Dickey-Fuller Unit Root test of the time series data

Variables	Intercept and trend	5% critical Value	Order
TCAP	-3.0601	-2.9378	I(1)
TREC	-4.0290	-2.9358	I(0)
TEDU	-4.4232	-2.9378	I(1)

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TRACO	-3.6515	-2.9378	I(1)
HEA	-4.0206	-2.9378	I(1)
DEF	-6.2634	-2.9378	I(1)
AGR	-5.2055	-2.9378	I(1)
INF	-3.3899	-2.9358	I(0)
FB	-3.9144	-2.9378	I(1)

The results of the stationarity (unit root) test indicate that TREC, TCAP, AGR, EDU, HEA, FISBA, and IFN are stationary at first difference, while DEF and TRACO are stationary at level. Moreover, the error correction variable ECM is stationary at level implying that the variables are co-integrated. Finally, we estimated the growth function above. The regression result is presented in the table 3 in appendix.

Table 3 - Regression Results (Ordinary Least Square Estimates)

Variables	Coefficients	T	P(t)
GDP	Dependent variable		
Constant	1.9964	0.61616	0.5420
TCAP	0.1977	10.2341	0.0000
TREC	0.0393	1.22367	0.2249
EDU	0.2580	1.11502	0.2583
TRACO	- 0.4111	- 3.11741	0.0032
HEA	4.936.9	1.42962	0.1622
DEF	0.3763	9.22698	0.0000
INF	-4.2743	- 0.00624	0.9507
AGRIC	2.5829	2.00696	0.0464
R^2	0.9952		
F	849.94	*P*(F) = 0.0000	

The estimation results reveal that the explanatory variables jointly account for approximately 58.96 percentage changes in economic growth. The Durbin Watson statistic (1.96) illustrates the absence of 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 (IFN) 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 0.005 percentage decrease in economic growth. These findings are in line with result of earlier studies (see Laudan, 1986; Barro, 1991; and Eugen & Skinner, 1992 and Folster & Henrekson, 2001) that government expenditure may slowdown economic growth. The negative impact of total capital and recurrent expenditures 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. Lastly, the error correction has been found to be significant and correctly signed, implying that a long run equilibrium or relationship exists between the variables.

We should recall that all the variables are I(1), as evident from the unit root tests. In order to capture the extent of cointegration among the variables, the multivariate cointegration methodology was conducted. The Johansen's trace test is used and the results are shown in Table 4 in the appendix. The trace test in Table 4 shows that

there are three (3) long-run equilibrium relationships of the variables (i.e. r = 3) respectively. The cointegration test results as evident in Table 4, indicates that the dependent variable GDP is cointegrated with TREC, TRACO, HEA and TDE, as such the test statistics strongly reject the null hypothesis. The results concluded that the variables (government expenditure) have long run impact on economic growth in Nigeria.

Table 4 – Cointegration Test Results

Date: 05/08/15 Time: 20:05
Sample: 1980 2012
Included observations: 32
Test assumption: Linear deterministic trend in the data
Series: GDP TCAP TREC EDU TRACO HEA DEF INF AGR
Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.998848	651.7481	192.89	204.95	None **
0.985512	381.0963	156.00	168.36	At most 1 **
0.836102	211.7190	124.24	133.57	At most 2 **
0.730615	139.3785	94.15	103.18	At most 3 **
0.562866	86.91396	68.52	76.07	At most 4 **
0.529572	53.81335	47.21	54.46	At most 5 *
0.268325	23.64888	29.68	35.65	At most 6
0.189690	11.15213	15.41	20.04	At most 7
0.066174	2.738616	3.76	6.65	At most 8

*(**) denotes rejection of the hypothesis at 5%(1%) significance level
L.R. test indicates 6 cointegrating equation(s) at 5% significance level

Table 5 – Error Correction Model Result of Granger Causality Test

Pairwise Granger Causality Tests			
Date: 05/08/15 Time: 22:32			
Sample: 1980 2012			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Probability
GOVEXP does not Granger Cause GDP	32	5.02745	0.01204
GDP does not Granger Cause GOVEXP		15.5649	1. 5E-05

The ECM results as shown in Table 5 indicate that the coefficients of TREC, TRACO, TEDU and HEA have positive and statistically significant effect on economic growth in Nigeria. While the results of Error Correction Model (ECM) has negative sign and the significance of the Error Correction term (EC) indicated that there exist long run relationship between economic growth and Government expenditure and its takes more years to attain equilibrium. The ECM indicates a feedback of approximately 75% of the previous year's disequilibrium from long run elasticity of the explanatory variables. That is, the coefficient of the error correction term measures the speed at which the level of real output adjusts to changes in the explanatory variables in an effort to achieve long run static equilibrium. It can be said therefore that the speed of adjustment is high. The adjusted R^2 is 84 percent. By implication, this shows that 84 percent of the variations in real GDP growth can be explained by the variables taken together. The remaining 16 percent variations can be attributed to other forces outside the model. This suggests that government expenditure has influence on the economic growth. Therefore, the null hypothesis that 'government expenditure has no significant effect on economic growth in Nigeria is rejected. This implies that government expenditure has significant effect on the economic growth in Nigeria. These results also show a goodness of fit of the regression. The F-statistics of 28.01 shows that the explanatory variables are important determinants of the GDP growth rates in Nigeria. The Durbin-Watson statistics of 1.98 is less than 2 and therefore rules out the possibility of auto-correlation.

CONCLUSION AND RECOMMENDATION

From the foregoing empirical results, the study concludes that government expenditure causes economic growth. This result confirmed Keynes' hypothesis that growth in government expenditure causes growth in GDP. It is also obvious that the result of the study has important economic implications. In order to achieve maximum economic growth, public expenditure needs to be better prioritized; investing in health offers higher return in terms of economic growth. This means that increasing expenditure on health services do not only have a large impact on poverty per naira spent, but also enhance growth in human productivity. This is because as more people get good health, they will increase their productivity which will enhance economic growth. This implies that shifting resources from low-productivity sectors, such as general administration to health, will generate economic growth in the country while increase in public expenditure on defense is to provide adequate security of life and property for sustainable economic growth. Hence insecurity

may scare away investors, as such government tends to increase expenditure on security. However, in the long run, increased expenditure on defense may divert funds away from more productive domestic investment which may be detrimental to economic growth, in view of dwindling government revenue.

Based on the results obtained in this study, it is recommended that:

a. Government should ensure that capital and recurrent expenditures are properly prioritized and well managed to accelerate economic growth.
b. Government should promote efficiency in the allocation of resources on human development by encouraging more private sector participation to ensure productivity-intensive growth.
c. There should be greater transparency and accountability on government spending at various sectors of the economy in order to prevent diversion of public funds to private accounts of government officials.
d. Government should increase her funding of anti-corruption agencies such as 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.
e. Government should encourage 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.

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APPENDICES

Appendix 1: Government Expenditure and Selected Components (N'Billion)

Years	Total Capital Expenditure	Total Recurrent Expenditure	Defense	Education	Health	Agric	Transport & Comm
1980	5.4	3.2	-	0.2	0.1	0.0	0.0
1981	6.6	4.8	-	0.2	0.1	0.0	0.0
1982	6.4	5.5	-	0.2	0.1	0.0	0.0
1983	4.9	4.8	-	0.2	0.1	0.0	0.0
1984	4.1	5.8	-	0.2	0.1	0.0	0.0
1985	5.5	7.6	-	0.3	0.1	0.0	0.1
1986	8.5	7.7	-	0.3	0.1	0.0	0.1
1987	6.4	15.6	-	0.2	0.0	0.0	0.2
1988	8.3	19.4	-	1.5	0.4	0.1	0.3
1989	15.0	26.0	-	3/0	0.6	0.2	0.3
1990	24.0	36.2	-	2.4	0.5	0.3	0.2
1991	28.3	38.2	-	1.3	0.6	0.2	0.6
1992	39.8	53.0	-	0.3	0.2	0.5	2.0
1993	54.5	136.7	-	8/9	3.9	1.8	0.4
1994	70.9	90.0	4.2	7/4	2.1	1.2	1.1
1995	121.1	127.6	6.6	8.3	3.3	1.5	2.1
1996	212.9	124.5	10.8	11.5	3.0	1.6	1.6
1997	268.7	158.6	14.2	14.9	3.9	2.1	1.9
1998	309.0	178.3	14.8	13.6	4/7	2.9	11.1
1999	498.0	449.7	53.2	43/6	16.6	59.3	3.0
2000	239.5	461.6	43.4	58.0	15.2	6.3	33.9
2001	438.7	579.3	47.1	39.9	24.5	7.1	29.4
2002	321.4	696.8	69.1	80.5	40.6	10.0	22.7
2003	241.7	984.3	51.1	64.8	33.3	7.5	8.1
2004	351.3	1,321.2	76.3	76.5	34.2	11.3	8.0
2005	519.5	1,390.1	71.7	82.8	55.7	16.3	9.8
2006	552.4	1,390.1	84.2	119.0	62.3	17.9	32.2

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2007	759.3	1,589.3	72.1	150.8	81.9	32.5	67.4
2008	960.9	2,117.4	95.8	164.0	98.2	65.4	33.4
2009	1,152.8	2,128.0	54.8	137.1	90.2	22.4	90.0
2010	883.9	3,109.4	198.7	170.8	99.1	28.2	42.4
2011	918.5	3,314.4	283.2	335.8	231.8	41.2	13.1
2012	874.8	3,325.2	296.8	348.4	197.9	33.3	23.2

Sources: *Federal Ministry of Finance, Office of the Accountant-General of the Federation*
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