

Government Expenditure and Economic Growth in Nigeria

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Abstract

This study examined the impact of government expenditure on economic growth in Nigeria for the period, 1984-2015 with view to re-assess the Keynesian and Endogenous Growth Models proposition that public expenditure stimulates economic growth. The study employed Johansen co-integration and Error Correction Model. The empirical results showed that public (recurrent and capital) expenditure has significant positive impact on the growth of the economy in the long run and an insignificant negative impact on the Nigerian economy in the short run, reinforcing the Keynesian and Endogenous Growth Models that public expenditure stimulates economic growth in Nigeria when seen in the long run. The study therefore recommended that Nigerian government should readjust spending priority to accommodate more capital expenditure and channeling of increase expenditure into some critical sectors of the economy such as health, power, education and general infrastructure are fundamental in maximizing government expenditure in Nigeria.

Keywords: Public Expenditure & Economic Growth

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I. Introduction

The emergence of public expenditure in achieving macroeconomic objectives has been a topical issue between two contending proponents; the Wagnerians and Keynesians presenting two parallel and polarized views in terms of the relationship between public expenditure and growth. According to Essien (1997), Wagner introduced a model showing that public expenditures are endogenous to economic growth, and that there exist long-run tendencies for public expenditure to grow relatively to some income aggregates such as the Gross Domestic Product (GDP). Keynes (1936) however, argued that the causality between public expenditure and national income runs from public expenditure to national income. Perspectives of variations growth models opens for further discourse.

Interestingly, achieving a sustained economic growth is a macro-economic objective that every name drives at achieving. Admittedly, Ijuo & Andohol (2020) observed that ensuring a rapid and sustainable economic growth and development is a major goal of most economies of the world (to which developing countries, Nigeria to be specific is not left out in the pursuit). In this regard, Essien (1997) opined that economic growth is the most important objective of government in developing countries. Accordingly, government spending has formed a point of debate for achieving economic growth in public economics. This is important for developing countries like Nigeria, most of which have experienced increasing level of public expenditure over time. This tends to be associated with rising fiscal deficits, resulting from inadequate system of expenditure control, intense competition for funds among various Ministries, Agencies and Departments (MDAs), suggesting their limited ability to raise sufficient revenue to finance higher levels of government expenditure (Kolawole, 2016). For instance, between 2010 and 2015 total government expenditure increased from ₦153.9 billion to ₦5.06 trillion while GDP continued to wobble between 4.9% in 2010 and 2.7% in 2015 with less than 1% in the first and second quarters of 2016.

In general, it is believed that Nigerian economic policies have had a big influence on the trend of government expenditures for economic growth. However, the reality in Nigeria leads the policy makers to become divided as whether the expansion of government expenditure promotes or impedes economic growth. Meanwhile, in most of the previous empirical studies (Abu & Abdullahi, 2010; Badamosi, 2003; Feltenstein & Iwata, 2005; Robinson et al., 2014; Abutu & Agbede, 2015; Kolawole, 2016; Bonmwa & Ishmael, 2017; & Onifade et al., 2020), no consensus evidence exists for the relationship between government expenditure and economic growth. Results and evidences differ by countries/regions, analytical methods employed, and categorization of public expenditures which therefore made relevance the place of this study. Thus this study fill this gap, by examining the effects of government expenditures on economic growth in Nigeria between 1984 and 2015 in order to validate if public expenditure has positive effect on the Nigerian economy or not.

II. Review Of Related Literature

Conceptual Clarifications

Jhingan (2007) defines economic growth as the quantitative sustained increase in a country's per-capita output or income which is accompanied by increase in labor force, consumption and volume of trade. Andohol (2012) supports this definition as he posits that, economic growth is the process which leads to sustained increase in the output of goods and services per head. On the other hand, Todaro & Smith (2011) define economic growth as the increase in the market value of goods and services produce by economy over time. It is conventionally measured as the percentage of increase in real Gross Domestic Product (GDP). For the purpose of this study, Todaro and Smith's definition of economic growth as the increase in the market value of goods and services produce by economy over time is adopted.

Similarly, GDP real values were used. This is to circumvent the problem of nominal series (values) which incorporate a price component that can obscure the fundamental features that we are interested in. This is particularly problematic when two nominal variables are being compared, since the dominant price component in each will produce close matches between the series, resulting in a spuriously high correlation coefficient (Dimitrios & Hall, 2007). Government expenditure constitutes outlays for the provision of public goods and services, particularly in areas where the price mechanism fails in effectively allocating resources to maximize welfare. These public goods are usually non-excludable and non-rival in consumption thus, making it impossible for potential producers to make profit or at least recover cost (Ajayi & Iyoha, 1998). Government expenditure can be classified into recurrent, capital and transfers.

Theoretical Review

The study is anchored on the Keynesian and endogenous growth models.

The Keynesian growth theory put that structural rigidities and certain characteristics of market economies would exacerbate economic weakness and cause negative distortions in aggregate demand and hence that government intervention is vital to correct such. Keynes further argued that aggregate demand does not necessarily equal the productive capacity of the economy, instead, it is influenced by a host of factors and sometimes behaves erratically, affecting production, employment, and inflation (Blinder, 2008). Thus private decisions sometimes lead to inefficient macroeconomic outcomes, requiring active policy responses by the public sector via monetary and fiscal policy options.

The endogenous growth model on the other hand holds that economic growth is primarily, the result of endogenous and not external forces (Romer, 1994). The models therefore endogenized technical progress and incorporated human capital into the aggregate production function (Rebelo, 1991). The theory emphasizes that investment in human capital, innovation, and knowledge are significant contributors to economic growth. It also focuses on positive externalities and spill-over effects of a knowledge-based economy which will lead to economic development.

By way of linkages, government intervention in the economy through induced investment (increased spending and reduced taxes by the government or the other way round) in order to stimulate the economy (Keynesian view), as well as government investment in human capital, innovation and knowledge significantly contribute to economic growth (endogenous growth model proposition).

Empirical Literature

Using OLS to analyze the impact of fiscal policy tools on Nigeria economic growth from 1981 to 2004, a study built on Solow's model, Oluwanmi & Tajuden (2007) found out that there is no significant impact of fiscal policy variables on economic growth in Nigeria. Examining the effect of government expenditure on economic growth in Nigeria from 1970 to 2008 by employing Co-integration and Error Correction Models (ECM), Abu & Abdullahi (2010) found that government total expenditure, total recurrent expenditure and expenditure on education have negative effects on economic growth while expenditure on transport and communication, and health has significant positive impact on economic growth.

In another study, Badamosi (2003) evaluated the desirability of recurrence and magnitude of Nigeria's fiscal deficit from 1986 to 1999 and its effect on economic growth in Nigeria. The study revealed that budget deficit is a recurring feature of Nigeria's fiscal policy. That fiscal deficit have positive impact on economic growth but it is not sustainable because it crowds-out private investment in Nigeria and its effects on economic growth is marginal. Also, Shakirat (2018) found out that government spending on transport and communication, education and health infrastructure has significant positive effects, while spending on agriculture and natural resources infrastructure had a significant negative effect on the economic growth of Nigeria for the period, 1980-2016. The study used Weighted Least Square and Vector Error Correction Model.

Feltenstein & Iwata (2005) examined the impact of fiscal and economic decentralization in China on the country's economic growth and inflation, using a vector autoregressive (VAR) model with latent variables. Their findings offered strong evidence that there is a connection between decentralization and macroeconomic

performance in China; economic decentralization appeared to be positively related to economic growth in real output for the entire post-war period in China. It however, showed negative effect on inflation rate. From the investigation of relationship between government expenditure and economic growth in Nigeria using ordinary least square (OLS) analytical model, Robinson et al. (2014) found out that there exist an inverse relationship between government expenditures on health and economic growth.

Also, Abutu & Agbede (2015) examined the relationship between government expenditure and economic growth in Nigeria using a co-integration and error correction model for the period 1970-2010. It was found out that a positive and significant linear relationship between the two categories (capital and recurrent) of government expenditure and economic growth in the long run, while economic growth had a positive and significant linear relationship with recurrent expenditure and negative but significant relationship with capital expenditure in the short run. Similarly, using Ordinary Least Square technique with Error Correction model on a time series data covering 1981-2016, Bonmwa & Ishmael (2017) empirically assessed the impact of government expenditure on the growth of Nigerian economy and found that social and economic services had negative and insignificant effect on economic growth while administration had positive and significant.

Onifade et al. (2020) used Pesaran's ARDL approach to investigate the impacts of public expenditures on economic growth in Nigerian for the period, 1981-2017. The study found out that recurrent expenditures had significant negative effect, while capital expenditure had positive but insignificant effect on economic growth in Nigeria. Also, from the investigation of the relationship between public spending and inclusive growth using ARDL and VECM, Kolawole (2016) found out that productive public expenditure positively influences inclusive growth.

Conclusively, the existing literature reveals that the debate pertaining public expenditure and economic growth relationship has been one that is unending and inconclusive. Mix results and evidences exist for the relationship between public spending and economic growth. Similarly, the variation in periods under investigation, stages of countries' development, analytical method employed and categorization of public expenditures have created a gap which made relevant, this study.

III. Research Methodology

This study adopted the Keynesian and endogenous growth models. Though the application of the models is similar to most past empirical investigations in the development literature, this study is however different and unique in terms of its decomposition of government expenditure into power, health, total investment and trade openness not done in these other studies. The data used were sourced from Central Bank of Nigeria (CBN), statistical bulletin and National Bureau of Statistics (NBS) publications.

Model specification

Following the adoption of Keynesian and endogenous growth models, the model expresses economic growth (GDP) as a function of various levels and components of government expenditure that include total capital expenditure (TCE), total recurrent expenditure (TRE), expenditures on education (GEE), health (GEH), power (GEP), defense (GED), while trade openness (TO) and gross capital formation (TI) were also included as controlled variables. In scientific notation, Keynesian hypothesis consist of the following composition:

$$Y = C + I + G + X-M \dots\dots\dots 1$$

Where, Y is the aggregate output (GDP); C, the consumption; I, the investment; G, government expenditure; and X-M is the net exports (exports-imports). From this model, adjustment has been made to exclude private consumption. Thus, the primary equation to be used for this study is re-specified as:

$$GDP = f(TCE, TRE, GEE, GEH, GEP, GED, TO, TI) \dots\dots\dots 2$$

Where, TCE is Total Capital Expenditure; TRE, Total Recurrent Expenditure; GEE, Government Expenditure on Education; GEH, Government Expenditure on Health; GEP, Government Expenditure on power; GED, government Expenditure on Defense; TO, Trade Openness; and TI, Total Investment.

Equation (2) is transformed into two econometric functional models for estimation in order to avoid the problem of over-parametization which may consequently result in over-fitting and poor predictive power of the model given the period the study covered (Lukacs et al., 2010). This produced equations 3 and 4.

$$GDP_1 = \beta_0 + \beta_1 tce + \beta_2 gee + \beta_3 ged + \beta_4 to + U \dots\dots\dots 3$$

Where β_0 =constant, β_1 to β_4 are the coefficients of the variables to be estimated with *a priori* expectation that $\beta_1, \beta_2,$ and $\beta_4 > 0$ while $\beta_3 < 0$

$$GDP_2 = \phi_0 + \phi_1 tre + \phi_2 geh + \phi_3 gep + \phi_4 ti + U \dots\dots\dots 4$$

And ϕ_0 =constant, ϕ_1 to ϕ_4 are the coefficients of the variables to be estimated with *a priori* expectation that ϕ_2, ϕ_3 and $\phi_4 > 0$ while $\phi_1 < 0$.

IV. Results And Discussion

Results of Unit Root Test

The study employed the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests. The ADF and PP tests' null hypotheses are accepted as series were not stationary. The results of these tests are presented in Table 1.

Table 1: Results of Unit Root Test

Variables	Augmented Dickey-Fuller (ADF)				Phillips-Perron (PP)			
	Level		First Difference		Level		First Difference	
	Test Statistic	Critical value	Test Statistic	Critical Value	Test Statistic	Critical Value	Test Statistic	Critical Value
RGDP	-1.788	-3.562	-5.715	-3.568**	-1.866	-3.562	-5.715	-3.568**
TCE	-0.938	-3.215	-4.491	-3.568**	-0.198	-2.216	-4.896	-3.568**
TRE	-2.952	-4.284	-8.833	-3.218***	-2.940	-4.284	-26.271	-3.218***
GEE	-3.116	-3.562	-5.727	-4.323*	-3.108	-4.284	-18.020	-4.296*
GEH	-1.311	-3.562	-4.710	-3.218***	-1.392	-3.562	-5.510	-3.218***
GEP	-1.501	-4.284	-4.539	-3.568**	-1.478	-4.284	-4.402	-3.568**
GED	-1.944	-3.568	-5.128	-4.296*	-0.982	-3.562	-5.090	-4.296*
TO	-0.476	-3.587	-5.218	-4.356*	0.413	-4.284	-273.33	-4.296*
TI	-1.253	-4.284	-5.738	-3.568**	-1.253	-4.284	-5.738	-3.568**

Note: *, **, and *** indicate the presence of co-integration relationship at 1%, 5% and 10% significance level respectively.

Source: Author's Computation from E-views Output

From Table 1, the results of Augmented Dickey-Fuller reveals that no variable was stationary at levels, but all became stationary at first difference. The results of Philips Peron confirmed that of the ADF. This means that the trend deviations of these variables are not stable.

Co-integration Test Results

Johansen co-integration was conducted to determine if long relationship exists or not. This is presented in Tables 2a & 2b, and Tables 3a & 3b for the both models.

Table 2a: Johansen Co-integration Trace Test Results (Model 1)

Hypothesized No. Of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.757607	76.90845	69.81889	0.0122
At most 1	0.451366	34.39256	47.85613	0.4805
At most 2	0.288222	16.38286	29.79707	0.6851
At most 3	0.185525	6.183179	15.49471	0.6739
At most 4	0.000894	0.026834	3.841466	0.8698

Source: Author's Computation from E-views Output

Table 2a which captures trace test indicates the existence of one (1) co-integrated equation. This is because the Trace Statistics of 76.90845 is more than its corresponding critical value of 69.81889 at 5% significance level. We therefore reject the null hypotheses of none* of the hypothesized co-integrating equation. For the remaining number of hypothesized co-integrating equations (at most 1, 2, 3, and 4), we do not reject the null hypotheses as their trace statistic values are less than their respective critical value at 5% significance level.

Table 2b: Johansen Co-integration (Model 1) – Maximum Eigenvalue

Hypothesized No. Of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.757607	42.51589	33.87687	0.0037
At most 1	0.451366	18.00970	27.58434	0.4943
At most 2	0.288222	10.19968	21.13162	0.7257
At most 3	0.185525	6.156346	14.26460	0.5932
At most 4	0.000894	0.026834	3.841466	0.8698

Source: Author's Computation from E-views Output

Table 2b above which presents the Maximum Eigen test indicates the existence of one (1) co-integrated equation. This is because the Maximum Eigen Statistics of 42.51589 is more than its corresponding critical values of 33.87687 at 5% significance level. We therefore reject the null hypotheses of none* of the hypothesized co-integrating equation. For the remaining number of hypothesized co-integrating equations (at most 1, 2, 3, and 4), we do not reject the null hypotheses as their Maximum Eigen statistic values are less than their respective critical values at 5% level of significance.

Table 3a: Johansen Co-integration (Model 2) – Trace Test Result

Hypothesized No. Of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.624523	82.00668	69.81889	0.0039
At most 1	0.585057	52.61993	47.85613	0.0167
At most 2	0.371049	26.23152	29.79707	0.1219
At most 3	0.297965	12.32048	15.49471	0.1422
At most 4	0.055321	1.707315	3.841466	0.1913

Source: Author’s Computation from E-views Output

Similarly, Table 3a which captures trace test for model 2 indicates the existence of two (2) co-integrated equations. This is because the Trace Statistics of 82.00668 and 52.61993 respectively are more than their corresponding critical values of 69.81889 and 47.85613 at 5% significance level. We therefore reject the null hypotheses of none* and at most 1 respectively of the hypothesized number of co-integrating equations. For the remaining number of hypothesized co-integrating equations (at most 2, 3, and 4), we do not reject the null hypotheses as their trace statistic values are less than their respective critical value at 5% significance level.

Table 3b: Johansen Co-integration (Model 2) – Maximum Eigenvalue

Hypothesized No. Of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.624523	29.38674	13.87687	0.0156
At most 1	0.585057	26.38841	17.58434	0.0075
At most 2	0.371049	13.91104	21.13162	0.3724
At most 3	0.297965	10.61317	14.26460	0.1747
At most 4	0.055321	1.707315	3.841466	0.1913

Source: Author’s Computation from E-views Output

Again, Table 3b which presents the Maximum Eigen test for model 2 indicates the existence of two (2) co-integrated equations. This is because the Maximum Eigen Statistics of 29.38674 and 26.38841 respectively are more than their corresponding critical values of 13.87687 and 17.58434 at 5% significance level. We therefore reject the null hypotheses of none* and at most 1 respectively of the hypothesized number of co-integrating equations. For the remaining number of hypothesized co-integrating equations (at most 2, 3 and 4), we do not reject the null hypotheses as their Maximum Eigen statistic values are less than their respective critical values at 5% level of significance.

Co-integration analysis is a process of estimating the long run parameters in a relationship with non-stationary variables. Thus, the forgone implies that all the variables in both model 1 and 2 are co-integrated. In other words, they have long-run relationship. Tables 4 and 5 present the long-run co-integration results for RGDP.

Table 4: Long-Run Co-integration Results for Model (1)

Normalized co-integrating co-efficient (standard error in parentheses)				
RGDP	TCE	GEE	GED	TO
1.000000	-0.266364 (0.25139)	-0.396569 (0.04052)	-0.021555 (0.02755)	0.225084 (5.41835)

Source: Author’s Computation from E-views Output

Table 5: Long-Run Co-integration Results for Model (2)

Normalized co-integrating coefficients (standard error in parentheses)				
RGDP	TRE	GEH	GEP	TI
1.000000	-0.260315 (0.17476)	0.057657 (0.07092)	-0.929826 (0.2274)	-0.936886 (0.49552)

Source: Author’s Computation from E-views Output

Impact of Government Expenditure on Economic Growth in Nigeria (Long-run)

The nature of the relationship between public expenditure (TCE, TRE, GEE, GEH, GEP, and GED) and economic growth is captured in the estimates presented below. These estimates are drawn from the results in Table 4 and 5, however in the long run the signs are reversed giving equation 5 and 6:

$$RGDP_1 = 0.27TCE + 0.40GEE + 0.02GED - 0.22TO \dots\dots\dots 5$$

$$RGDP_2 = 0.26TRE - 0.06GEH + 0.93GEP + 0.94TI \dots\dots\dots 6$$

The estimates from the two models, for TCE, GEE, TRE, GED, TI and GEP are positively signed and are in accordance to the a priori expectation, but that of GEH and TO are negative, defiling the a priori expectation. The results implies that in the long run, public expenditure decomposed into total capital expenditure (TCE), total recurrent expenditure (TRE), including government expenditure on education (GEE), government expenditure on power (GEP), total investment (TI) and government expenditure on defense (GED) have positive impact on real gross domestic product (RGDP), while GEH and TO rather have negative impact. The result indicates that, a percentage increase in the total capital expenditure (TCE) will bring about 27% increases in real gross domestic product. Also, a percentage increase in the total recurrent expenditure (TRE) will result in 26% increase in the real gross domestic product (RGDP). In the same direction, a percentage increase in government expenditure on education (GEE), government expenditure on power (GEP), total investment and government expenditure on defense (GED) will cause 40%, 93%, 94% and 2% increase in real gross domestic product respectively. But that a percentage increase in expenditure on health (GEH) and trade openness (TO) will result in 6% and 22% decrease in real domestic product respectively.

Justifiably, in the long run, total recurrent expenditure (TRE), and government expenditure on education (GEE) are expected to better the lives of people and to develop human resource (as people have become skillful, safe/secured and hence have conducive working and business environment) and therefore will yield positive contributions to the economy. On the other hand, trade openness being negative may suggest the effect of unfavorable terms of trade between Nigeria and her trading partners. Similarly, expenditure on health being negative may not be unconnected with low spending of government in the health subsector thereby negating the expected positive effects.

The coefficients of total capital expenditure (TCE), total recurrent expenditure (TRE), government expenditure on education (GEE), government expenditure on power (GEP), total investment (TI) and government expenditure on health (GEH) are significant while that of government expenditure on defense and total investment are insignificant.

The results of this study is consistent with the findings of Abutu & Agbede (2015) and Kolawole (2016) that in the long run, a positive and significant linear relationship exists between public (capital and recurrent) expenditure and economic growth in Nigeria.

Impact of Government Expenditure on economic growth in Nigeria (Short-run)

Having ascertained the long-run dynamics of the relationship among the variables of study, Vector Error Correction mechanism was further employed to reconcile the short run behavior of the variables with its long run phenomenon. These are presented in Tables 6 and 6b.

Table 6a: Results of Vector Error Correction Model (Short-run, Model 1)

Variables	Coefficient	Standard Error	T-Statistic
RGDP	1.196736	0.81507	1.46826
TCE	-0.399245	0.26693	2.99067
GEE	-0.106407	0.04225	-2.51844
GED	0.007268	0.02414	0.30111
TO	-14.58048	2.42696	-6.00771
C	0.076556	0.04820	1.58827
ECT	-0.332415	0.12009	-2.76812
R-Square :	0.784569	S.E:	0.141329
Adj. R-square:	0.645172	F-statistic:	5.628312

Source: Author's Computation from E-views Output

Table 6b: Result of Vector Error Correction Model (Short-run, Model 2)

Variables	Coefficient	Standard Error	T-Statistic
RGDP	0.829245	0.92807	0.89352
TRE	-0.032070	0.02168	-1.47910
GEH	0.015368	0.04594	0.33454
GEP	-0.344392	0.52136	-0.66056
TI	-0.065951	0.07417	-0.88915
C	0.015858	0.07521	0.21084
ECT	-0.397233	0.13624	-2.64773

R-Square : 0.467479 S.E: 0.222201
Adj. R-square: 0.122907 F-statistic: 1.356695

Source: Author's Computation from E-views Output

The results of the short-run dynamics (for models 1 and 2) shown in Tables 6a & 6b indicates that only the coefficients of TCE, GEE and TO are significant. The rest were insignificant at influencing the real gross domestic product in the current period (t). All the variables except government expenditure on defense and health were appropriately signed, showing negative relationship. This means that in the short-run, increase in total capital expenditure, government expenditure on education and trade openness (in model 1) and total recurrent expenditure, government expenditure on power and trade openness (in model 2) will reduce the growth of real GDP and vice versa. The result of government expenditure on defense (in model 1) and health (in model 2) which however defied the *a priori* expectation showed that increase in government expenditure on defense and health will bring about increase in real gross domestic product in the short run. This may be attributed to the fact that health is wealth; as government invests in health and defense, people live healthily, lives and property are preserved; people are able to carry out their daily economic activities and contribute to the growth of RGDP.

Similarly, the results of the lagged Error Correction Term (ECT) for both models were significant at 5% level and had a negative signs as expected. The error correction term indicates that about 33% and 20% (for model 1 and 2 respectively) of the previous year's disequilibrium from long run equilibrium is corrected for within a year. This means that the speed at which the system reverts back to equilibrium from a state of disequilibrium is relatively faster in model 1 than 2. Also, the independent variables in model 1 accounted for 78% while those in model 2 accounted for 47% variations in the level of economic growth as captured by the coefficient of multiple determination- R^2 . The F-statistic of 5.628312 for model 1, and 1.356695 for model 2 which are statistically significant shows that the models are well specified.

V. Conclusion and Future Scope

The empirical evidence from this study has shown that in the long run, public expenditure decomposed into total capital expenditure (TCE), total recurrent expenditure (TRE), government expenditure on education (GEE), government expenditure on power (GEP), and total investment (TI) significantly influenced real gross domestic product (RGDP) positively during the period of study. In this same period, government expenditure on defense (GED) had positive but insignificant effect on real domestic product. However, expenditure on health (GEH) had significant and negative impact while trade openness (TO) have negative but insignificant effect on real gross domestic. In the short run, however, government expenditure on health (GEH) and defense (GED) positively affected RGDP, but where insignificant. Total capital expenditure (TCE), government expenditure on education (GEE) and trade openness (TO) significantly impacted the real gross domestic product (RGDP) negatively, while total recurrent expenditure (TRE), expenditure on power (GEP) and total investment (TI) have negative but insignificant effect on RGDP. In other words, public (recurrent and capital) expenditure has significant positive impact on the growth of the Nigerian economy in the long run and an insignificant negative impact in the short run. It can therefore be concluded that public expenditure in the form of capital and recurrent expenditure propelled economic growth in Nigeria in the long run, with the reverse being the case in the short run. Seen in terms of long run analysis, the finding reinforces the Keynesian and Endogenous Growth Models that public expenditure stimulates economic growth in Nigeria. The import of this finding drives the recommendation that Nigerian government should readjust spending priority to accommodate more capital expenditure and channeling of increase expenditure into some critical sectors of the economy such as health, power, education and general infrastructure are fundamental in maximizing government expenditure in Nigeria.

References

- [1]. Abu, N & Abdullahi, U (2010). Government Expenditure and Economic Growth in Nigeria,1970-2008: A Disaggregated Analysis, *Business and Economics Journal*, Volume 2010: BEJ-4: 1-11.
- [2]. Abutu, U. O., & Agbede, E. A. (2015). Government Expenditure and Economic Growth in Nigeria: A Co-integration and Error Correction Modeling, Munich Personal RePEc Archive, MPRA Paper No. 69676, Accessed on 2nd December, 2020 from <https://mpra.ub.uni-muenchen.de/69676/>

- [3]. Ajayi, S.I & Iyoha, M (1998).Debt Overhang and Debt Forgiveness: The Case of Severely-Indebted Low-Income Countries of Sub-Saharan Africa.*Journal of Economic management, Vol5, No1 pp 63-89*
- [4]. Andohol, J. 2012. Nigeria’s Food Security Programs: Implications for MDG’s Goal of Extreme Hunger Eradication, *International Journal of Business and Social Science*, vol. Vol. 3, no. 9.
- [5]. Badamosi, U.B (2003). Assessment of Nigeria Fiscal Deficit 1986-1999. An unpublished M.sc Thesis Submitted to Department of Economics, Bayero University Kano.
- [6]. Blinder, A. S. (2008). Keynesian Economics. In David R. Henderson (ed). Concise Encyclopedia of Economics (2nd ed.) Indianapolis: Library of Economics and Liberty. ISBN 978-0865976658. OCLC 237794267
- [7]. Bonmwa, T. G. & Ishmael, O. (2017). An Empirical Analysis of Government Expenditure and Economic Growth in Nigeria, *Journal of Economics and Development Studies*, p. 123-134. DOI: 10.15640/jeds.v5n4a11
- [8]. Brooks, C (2008). *Introductory Econometrics for Finance*. Cambridge, Cambridge University Press
- [9]. Dimitrios, A. & Stephen, G. H (2007).*Applied Econometrics*. Palgrave Macmillain, New York, Revised Edition.
- [10]. Essien, E.A (1997). Public Sector Growth: An Econometric Test of Wagner’s Law. CBN Economic and financial Review, Vol.35, No.3 pp 332-352.
- [11]. Feltenstein, A. & Iwata, S. (2005). Decentralization and Macroeconomic Performance in China: Regional Autonomy has its Costs. *Journal of Development Economics*, Vol. 76, p.481-501.
- [12]. Ijuo, O. A. & Andohol, J. (2020). Agricultural Exports and Economic Growth in Selected West African Countries, *World Academics Journal of Management*, Vol.8, Issue.1, pp.29-39. Available online at: www.isroset.org
- [13]. Jhingan, M. L. (2007). *Macroeconomic Theory*. Delhi: Vrinda Publications (P) Ltd.
- [14]. Keynes, J. (1936).*General Theory of Employment, Interest and Money*, London: Macmillan Press
- [15]. Kolawole, O. K. (2016). Public Spending, Institutional Quality and Inclusive Growth in Nigeria: An Econometric Assessment, A selected Paper for the 2015 Conference Proceedings of the Nigerian Economic Society.
- [16]. Lukacs, P. M., Burnham, K. P. & Anderson, D. R. (2010) "Model selection bias and Freedman's paradox." *Annals of the Institute of Statistical Mathematics*, 62(1), 117–125 [doi:10.1007/s10463-009-0234-4](https://doi.org/10.1007/s10463-009-0234-4)
- [17]. Onifade, S. T., Savas C., Savas, E., Asongu, S. & Bekun, F. V. (2020). An Empirical Retrospect of the Impacts of Government Expenditures on Economic Growth: New Evidence from the Nigerian Economy, *Springer Journal of Economic Structure*. Retrieved from <https://doi.org/10.1186/s40008-020-0186-7>.
- [18]. Rebelo, S. (1991). Long-Run Policy Analysis and Long-Run Growth. Retrieved from www.jstor.org/stable/2937740
- [19]. Robinson, M. O., Eravwoke, K. E., & Ukavwe, A. (2014). Government Expenditures and Economic Growth: The Nigerian Experience, *Mediterranean Journal of Social Sciences*, p. 89-94. Doi:10.5901/mjss.2014.v5n10p89
- [20]. Romer, P. M. (1994). "The Origins of Endogenous Growth," *Journal of Economic Perspectives*, vol. Vol. 8, no. Issue 1, pp. 3-22.
- [21]. Shakirat, A. B. (2018). Government Spending on Infrastructure and Economic Growth in Nigeria,*Journal of Economic Research*. Retrieved from <https://doi.org/10.1080/1331677X.2018.1436453>
- [22]. Todaro, M.P and Smith, P.C (2011). *Economic Development*, Pearson educational Ltd, New York. 11th edition.

Adole Sunday Okpabi, et. al. “Government Expenditure and Economic Growth in Nigeria.” *IOSR Journal of Economics and Finance (IOSR-JEF)*, 12(1), 2021, pp. 28-35.