
Government Expenditure and Economic Growth in Nigeria: A Disaggregated Analysis

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Abstract: *The study investigated the effect of government expenditure on economic growth in Nigeria within a period of 33 years spanning (1987-2019). Data collected were from the Central Bank of Nigeria (CBN) Statistical Bulletin, where government expenditure on agriculture, government expenditure on health, government expenditure on education as the independent variables and real gross domestic product as the dependent variable. Multivariate model was developed in this analysis and Ordinary Least Square (OLS) regression analysis was used for the analysis. The Unit root test, co-integration approach and error corrections model were used for the analysis. It was also revealed from the result of our estimated model that government expenditure on education has a positive and insignificant impact on the Nigerian economy. It was also discovered that government expenditure on health has a positive and significant impact on the Nigerian economy. It was also discovered that government expenditure on agriculture has a positive and significant impact on the Nigerian economy. The study recommends that CBN should do more to encourage borrowing by bringing the lending rate to single digit to boost agricultural production in the rural settings.*

Keywords: *Government expenditure, economic growth, government expenditure on agriculture, government expenditure on health, government expenditure on education, real gross domestic product*

Introduction

A fundamental question in macroeconomic literature and traditional theory of growth is whether increasing government spending promotes economic growth (Alshahrani & Alsadiq, 2014). A review of relevant literature suggests that there is an extensive debate on whether government spending on specific social and economic services is growth-enhancing, or growth-retarding. Government expenditure is the total of the federal, state and the local government spending including transfers to parastatals and the other levels of government (Anyato, 2016). The term economic growth is described as the positive and sustained increase in aggregate goods and services produced in an economy within a given time period.

The relationship between government expenditure and economic growth has continued to generate series of debate among scholars. Keynes (1936) maintains that government could reverse economic downturns by borrowing money from the private sector and then returning the money to the private sector through various spending programs. High levels of government consumption are likely to increase employment, profitability and investment via multiplier effects on aggregate demand. Thus, government expenditure, even of a recurrent nature, can contribute positively to economic growth (Chude & Chude, 2013). On the contrary, a number of prominent authors of the neoclassical school argued that increased government expenditure may

slow down the aggregate performance of the economy because in an attempt to finance rising expenditure government may have to increase taxes and or borrowing (Amassoma, Nwosa, and Ajisafe, 2017) (Iweriebor, Egharevba, &. Adegboye, (2015). (Chukwubudom & Okoro, 2017), (Ademola, 2012).

The higher income tax may discourage or may be a disincentive to additional work, which in turn may reduce income and aggregate demand. In the same manner, high corporate tax leads to increases in production costs and reduced profitability of firms and high investment expenditure (Ighodaro, & Oriakhi, 2017). Sachs (2006) argues that among the developed countries those with high rate of taxation and high social welfare spending perform better on most measure of economic performance compared with countries with low tax rates of taxation and low social services spending. Hayek (2009) however argued that high levels of government spending engendered social fairness, economic equality and international competitiveness. This argument is in line with Sudha (2007) who pointed out those countries with large public sectors have grown slowly. Thus, there is no general consensus among scholars on the impact of increasing government expenditure on economic growth. The level of increase of government revenue from oil revenue and non-oil revenue including borrowing from internal and external sources has significantly affected the level of government expenditure in Nigeria over the years under review.

The mismatch between the performances of the Nigerian economy and massive increase in government total expenditure over the years raises a critical question on its role in promoting economic growth and development. Some authors such as (Oluwatoyin, Folasade and Fagbeminiyi, 2015) (Yaqub, Ojapinwa and Yussuff, 2016) contend that the link between public expenditure and economic growth is weak while others report varying degree of causal relationship in Nigeria (Onokoya 2013). It is against the above background that this study in government expenditure and economic growth is being undertaken. Over the past decades, the effect of government expenditure on economic growth has attracted significant attention from finance and development experts. Government sometimes increases expenditure and investment in unproductive projects (white elephant) rather than goods that can better (efficiently) be produced by the private sectors. This often produces misallocation of resources and impedes the growth of national output. The studies conducted by (Laudan, 1986), (Barro, 1991), and (Engen, Skinner, Folster, and Henrekson, 2001) asserted that increasing government expenditure may slowdown overall performance of the economy. That is, financing government increasing expenditure by raising taxes or borrowing may induce long-run adverse effects, as higher taxes discourages innovation which in-turn results in lower income and aggregate demand. Likewise, if government finances her expenditure by domestic borrowing, it may crowd-out private investors hereby mitigating the level of growth.

Available statistics show that total government spending has continued to rise steadily all through the years observed (Desmond et al, 2012). The total government recurrent expenditure has consistently been on the increase with about 18 percent rise from 1970-1985 and about 10 percent increases from 1990-2005; in the same manner the capital expenditure has maintained similar upward trend. Whether this continuous increase has accentuated the level of growth of

the Nigerian economy has necessitated the need for this research work. This research therefore investigated the effect of government spending on economic growth in Nigeria.

REVIEW OF RELATED LITERATURE

Theoretical Framework

The Keynesian Perspective on Government Expenditure

John M. Keynes, a British economist and the father of macroeconomics argued that public expenditure is a fundamental determinant of economic growth. Keynes theory made it clear that fiscal policy instrument (i.e., government expenditure) is an important tool for achieving short-term stability and long run growth rate. To achieve stability in the economy, this theory prescribes government interventions in the economy through economic policy specifically fiscal policy. From the Keynesian idea, public expenditure will contribute positively to economic growth.

Keynes argued that there is need for government to intervene in the economy because government could alter economic downturns by borrowing money from the private sector of the economy and then returning the money to the private sector through its various spending programmes. In addition, government capital and recurrent expenditure in the building of quality class rooms, laboratories, purchase of teaching and learning aids including computers and payment of salary will have multiplier effect on the economy. Expenditure in education will improve productivity and development by raising the quality of the labour force. It will also help in creating a body of educated leaders in both the private and public sectors of the economy to plan and manage the economy.

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, Keynes published the “General Theory of Employment, Interest and Money” which criticized the classical economists for putting too much emphasis on the long run. According to Keynes, our problems are short-run problems. We do not believe in the long-run because in the long-run, we are all dead. Keynes believed depression needed government intervention as a short term cure. Increasing saving will not help but spending. Government should increase public spending by giving individuals the 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 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. Of all economists who discussed the relation between public expenditures and economic growth, Keynes was among the most noted with his apparently contrasting viewpoint on this relation. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instrument to promote economic growth. From the Keynesian thought, public expenditure contributes positively to economic growth. Hence, an increase in 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 multipliers.

Review of Empirical Literature

Idoko, and Jatto, (2018) examined the relationship between government expenditure on agriculture and economic growth in Nigeria (1985- 2015). The multiple regression results of the study revealed that there exists a positive and significant relationship between government expenditure on agriculture and economic growth in Nigeria. Based on the result of the findings, recommendations such as government should formulate policies aiming at promoting government expenditure and domestic savings across the country to promote economic growth among others were made.

Iganiga and Unemhilin (2011) examined the effect of Federal government agricultural expenditure on the value of agricultural output between the period of 1985-2009. Federal government capital expenditure was found to be positively related to agricultural output..

Kumar, and Dkhar, (2019) examined the short and long run relationship between government expenditure on agriculture and its allied sector and agricultural output of Meghalaya. The results reveal that in the long run, the effect of public expenditure through agriculture and allied activities, on agricultural output is significantly negative, while expenditures on education and transport on agricultural output are significantly positive that is in line with several earlier studies.

Mohd., Muhammad, and Razak, (2012) studied the long-run relationship and causality between government expenditure in education and economic growth in Malaysian economy. it is found that the economic growth is a short term Granger cause for education variable and vice versa. Furthermore, this study has proves that human capital such as education variable plays an important role in influencing economic growth in Malaysia.

Obi, Ekesiobi, Dimnwobi, and Mgbemena (2016) examined government education spending and education outcome in Nigeria from 1970 – 2013.. Public health expenditure and urban population growth were also found to have positive effects on education outcome but are non significant in determining education outcome.

Oriakhi, and Ameh, (2014) evaluated the influence of government expenditure on the education sector in Nigeria from 1986-2012. Used a time series Linear forecasting model, The use of co-integration in this work showed there is a long-run relationship between the variables and they are statistically significant. The variables were on Gross domestic product public expenditure on education, education output and inflation rate

Obi and Obi (2016) analyzed impact of education expenditure on economic growth as a means of achieving the desired socio-economic change needed in Nigeria. The study used time series data from 1981 to 2012. Findings indicate that though a positive relationship subsists between education expenditure and economic growth, but a long run relationship does not exist over the period under study.

Yun, and Remali (2017) analyzed the determinants of the public education expenditure in Malaysia during the period of 1982 to 2015. However, the finding of a positive relationship between the inflation rate and public education expenditure contradicted the Keynesian Counter-Cyclical Theory.

Adhwa, Kauthar and Farah. (2018) studied the existence of long run relationship and short run causality by priority of Malaysia Government on spending for education and healthcare towards the effects of GDP on nominal values. The results revealed that in the long run, higher Government expenditure on human capital was co integrated with increasing nominal GDP values. In the short run the relationship of both healthcare and education in pair with nominal GDP were significantly bidirectional, except for inflation rate which both directions were insignificant.

Nura and Hussaini. (2015) investigated the relationship between government spending on education and economic growth in Nigeria using annual time series data for the period of 1981 to 2013 The error correction term is negative and statistically significant. This suggests there is no sign of any problem in the adjustment from short run to long run equilibrium.

METHODOLOGY

Research Design

The type of research design adopted in this study is *ex-post facto* research.

Nature and Sources of Data

The data used for this research work is mainly secondary data which were collected from the Central Bank of Nigeria's Statistical Bulletin 2019.

Model Specification

The fundamental linear equation which forms the model is drawn from the theoretical and empirical literature reviewed in the previous chapter. It is observed that there is a causal link between government expenditure and the Nigerian economy. In this section, we pursued the same objective further by specifying our model. The model is then used to verify the government expenditure determinants on the Nigerian economy. The Study modified the work of Kumar &

Dkhar (2019) which examined the short and long run relationship between government expenditure on agriculture. Their model was adapted by this present study. Their model is stated as:

$$AGO=f(EDX, TRPE)$$

Where

AGO = Real gross domestic product

EDX = Government expenditure on education

TRPE = Government expenditure on transport

Our present study modified the above model to suit our objectives as follows:

$$RGDP=F(GOA, GOE, GOH, GOM).$$

Where

RGDP = Real gross domestic product

GOA = Government expenditure on Agriculture

GOE = Government expenditure on Education

GOH = Government expenditure on Health

GOT = Government expenditure on Telecommunication

F = Functional notation

The econometric form of the model can be expressed as;

$$RGDP = B_0 + B_1GOA + B_2GOE + B_3GOH + GOT + \mu$$

Where;

B_0 is the constant intercept which shows the level of RGDP.

B_1 =coefficient of parameter GOA

B_2 = coefficient of parameter GOE

B_3 =coefficient of parameter GOH

B_4 =coefficient of parameter GOT

μ_1 = the stochastic error term or disturbance variable.

The model can be re-written in a logged form

$$\text{LogRGDP} = B_0 + \text{Log}B_1GOA + \text{Log}B_2GOE + \text{Log}B_3GOH + \text{Log} B_3GOT + \mu$$

Where

Log=logged values of the variables

Tool of Analysis

The evaluation technique applied in this study is the use of econometric estimation method of the ordinary least square which Koutsoyannis (1997) remark as the best linearly unbiased estimator (BLUE). The estimates of the model were obtained through the statistical package of E-view

version 8.0. Therefore, diagnostic statistics like the coefficient of determination, adjusted R-square, t-statistic, Durbin Watson statistics and standard error test was employed to test the plausibility of our parameter. Unit root test was also conducted to check the stationarity of our variable before the regression will be concluded.

RESULTS AND INTERPRETATION OF DATA

Presentation of Data

The study used 33-year time serial data. The dependent variable and independent variables were contained on Appendix 1. They are government spending on agriculture, government spending on education, government spending on health, government spending on telecommunication and real gross domestic product. All the variables were made to be at ratio before the stationarity tests were performed. Thus, all the variables were converted to log forms because non-of the variables were in rate form.

Descriptive Statistics

	RGDP	GOA	GOE	GOH	GOT
Mean	37421.52	19.06091	125.4712	75.18182	3134.025
Median	28957.71	9.990000	64.78000	33.27000	1127.230
Maximum	69810.02	65.40000	465.3000	296.4400	13671.13
Minimum	15237.99	0.020000	0.230000	0.040000	38.65000
Std. Dev.	20465.35	20.39829	148.9263	93.25835	4000.498
Skewness	0.565143	0.748773	0.995444	1.039088	1.318694
Kurtosis	1.685317	2.250823	2.457347	2.628988	3.489874
Jarque-Bera	4.133160	3.855374	5.854898	6.127636	9.894216
Probability	0.126618	0.145484	0.053533	0.046709	0.007104
Sum	1234910.	629.0100	4140.550	2481.000	103422.8
Sum Sq. Dev.	1.34E+10	13314.89	709729.2	278307.8	5.12E+08
Observations	33	33	33	33	33

The summary statistics show that the average mean of real gross domestic product is about 37421.52, The average mean for government expenditure on agriculture is 19.1, while averages mean of government expenditure on health, education and telecommunication rate were 125.4712, 75.18182 and 3134.025 respectively. The standard deviations of government expenditure variables such as government expenditure on Agriculture, government expenditure on health, government expenditure on education and government expenditure on telecommunication are 20.39829, 148.9263, 93.25835 and 4000.498. The values of the standard deviations indicate that there is wide spread of government expenditure in Nigeria.

This is also evident in the wide gap between the maximum and minimum values. For example, the maximum value of government spending on agriculture is 65.40 while the minimum is 0.020, with difference of 65.38. Similarly, the maximum of government spending on education is 465.30 while the minimum is 0.230. These performance variations are rather at the high side. Even in the case of government spending on health the maximum is 296.440 and the minimum is 0.040. It is equally observed that government spending on telecommunication varied widely over time. For instance, exchange rate is 13671.13 while its minimum value is 38.650. The wide variation over time indicates high level of fluctuation of government spending which affects real gross domestic product in Nigeria.

Interpretation of Result

Unit Root Test

It is necessary to verify the stationary properties of the variables in order to determine their order of integration. The ADF unit root test has been carried out on levels and differences of relevant variables. Each variable is tested for a unit root by employing the dickey –fuller approach with an intercept term. The null hypothesis underlying the unit root is that the variables under investigation have no unit root, while the alternative hypothesis is that it does. The table 4.1 below shows the stationary properties of the interested variables.

Table 4.1 Result of Unit Root Test

Variable	ADF		Order of integration	Significance
	At Level	1 st Diff		
RGDP	-0.98522	-5.362484	I (1)	1% (1)
GOA	-2.690927	-7.295785	1 (1)	1% (1)
GOE	-0.167851	-5.536559	I (1)	1% (1)
GOH	-1.062458	-6.456130	I (1)	1% (1)
GOT	-2.843773	-4917703	I (1)	1% (1)

Source: Computation using E-view version 9.0

From table 4.1 above, it was discovered that total government expenditure on agriculture, health and education as well as, real gross domestic product none were integrated at level, and all the mention variables become integrated at 1st difference at 1% level of significance respectively.

Co-Integration Test

The co-integration test is performed using the Johansen likelihood estimation equation which is done to test whether a long-run relationship exists amongst the variables. If it show at least one co-integration equations exist amongst the variables under consideration, then a long-run equilibrium relationship exist amongst them. The table below shows the summary of Johansen co-integration tests conducted.

Table 4.2 Johansen Co-integration Rank Test (Frace)

Hypothesized no of (ECS)	Eigen value	Trace statistics	5% Critical value	Prob**
Non*	0.970145	221.1748	69.81889	0.0000
At most 1*	0.796969	101.7870	47.85613	0.0000
At most 2*	0.590183	47.57749	29.79707	0.0002
At most 3	0.359603	17.24800	15.49471	0.0270
At most 4	0.059766	2.095310	3.841466	0.1478

Source: computation using e-view 9 version.

Unrestricted Co-integration Rank Test (Trace)

Hypothesized no of (ECS)	Eigen value	Trace statistics	Critical value	Prob**
None*	0.970145	119.3878	33.87687	0.0000
At most 1	0.796969	54.20947	27.58434	0.0000
At most 2	0.590183	30.32949	21.13162	0.0019
At most 3	0.359603	15.15269	14.26460	0.0361
At most 4	0.059766	2.095310	3.841466	0.1478

Source: Computation using E-view 9 version

Max-eign value test indicates 4 co-integrating equation(s) at the 0.05 level. *denotes rating of the hypothesis at the 0.05 level **Mackinnon – Haug-Michelis (1999) p-values.

The result of the co-integration in Table 2 shows that there are four co-integration relationships among the variables included in the model. This is confirmed by the results of both Trace test and the Max-eigenvalue test shown in Table 2. Specifically, the result of the co-integration test suggests that the variables have long-run equilibrium relationship with each other.

Error Correction Model

Table 4.3 Regression Result for the Model

Variables	Coefficient	Std-Error	T-statistics	Prob
C	6.721934	0.070548	95.28185	0.0000
LGOA	0.006009	0.005202	1.155143	0.2569
LGOE	0.002390	0.001467	1.629492	0.1133
LGOH	0.015711	0.002177	7.216736	0.0000
LGOT	0.015759	0.003708	4.250395	0.0002
ECM(-1)	-0.745965	0.047217	-2.003427	0.0000

Source: E-view 9.1 version.

R-Squared = 0.784338
Adjusted R² = 0.771812
F-statistics = 389.6582
Durbin-Watson = 1.624904

The R² which is the coefficient of determination or the measure of goodness of fit shows the degree of variation in the dependent variables. The closer R² is to 100%, the better the fit of the model. From the regression result, R² is 0.78%. This implies that the independent variable can explain about 78% of the variations in the dependent variable, leaving the remaining 22% which would be accounted for by other variables outside the model as captured by the error term.

The adjusted R² is 77% meaning that even with an adjustment in the dependent variables, they can still explain about 77% of the change in the dependent variable. The F-statistics measures the overall significance of the explanatory parameter. From the result in table 4.3 above, our computed value F-statistics is 389.6582 while the probability is 0.0000, Since the probability of the F-statistics in the computed output is less than the desired 0.05 level of significance, we accept and state that there is a significant relationship between the variance of the estimate and that of the dependent variable.

The specific objectives are addressed using the coefficient of regression and its corresponding t-statistics were use to test the hypothesis of the study. The result is as shown on the equation below:

$$RGDP = 6.721934 + 0.006009 LGOA + 0.002390 LGOE + 0.015711 LGOH + 0.015759 LGOT$$

Extent Government Expenditure on Agriculture Affects Economic Growth in Nigeria

From the estimated coefficient result of the regression in table 4.3 above, we find out that government expenditure on agriculture has a positive relationship with real gross domestic product given its value as 0.006009, this in conformity with a priori expectation because a unit increase in government expenditure on agriculture increase RGDP by 6 unit. However, government expenditure on agriculture is 1.155143; this implies is statistically insignificant in affecting Nigeria economy, This further suggest that the government spending on agriculture has not translated to the meaningful growth on the real gross domestic product of the economy. This finding provides us opportunity to reject alternative hypothesis and accept null hypothesis which states that Government Expenditure on Agriculture has no significant effect on Economic Growth in Nigeria

Extent government expenditure on education affects gross domestic product in Nigeria.

The coefficient of regression (0.002390LGOE) indicates that health (HE) has positive effect on the Nigeria economic development. Government expenditure on education has a positive impact given its value as 0.002390; this is in conformity with our a priori expectation, this further implies that increase in government expenditure on education increases the real gross domestic product by 2%. Government expenditure on health is statistically insignificant on the Nigeria economy, this were as a result of low t-statistics and high probability value. However this result laid credence of low government expenditure on education in Nigeria and as a result we reject alternative hypothesis and accept null hypothesis which states that government expenditure on education has no significant effects on gross domestic product in Nigeria

Extent government expenditure on health affected gross domestic product in Nigeria

From the result of our regression in table 4.3 above, it is discovered that government expenditure on health has a positive impact on Nigerian economy given its value as 0.015711 this is in conformity with theoretical expectation because increase in government expenditure on health increase the RGDP by 15%. From the t-statistics Colum it was discovered that Government expenditure on health is statistically significant (7.216736) at 10% level of significant on the Nigeria economy. The result implies that government spending on health has translated to meaningful growth in Nigeria. The result from t-test compels us to reject null hypothesis and accept alternative hypothesis which implies that government expenditure on health has significant effect on gross domestic product in Nigeria

Extent government expenditure on telecommunication affects Nigerian economic growth

Government expenditure on telecommunication has a positive impact on the Nigerian economic growth given its value as 0.015759; this is in conformity with theoretical expectation, however the increases on government spending on telecommunication, this will increase the performance of real gross domestic product in Nigeria. From the t-statistics Colum it was discovered that Government expenditure on telecommunication is statistically significant (4.250395) at 10% level of significant on the Nigeria economy. The result implies that government spending on telecommunication has translated to meaningful growth in Nigeria. As a result of this findings null hypothesis will be rejected while the alternative will be accepted which states that government expenditure on telecommunication has significant positive effects on Nigerian economic growth

The Durbin-Watson statistics is used to test for the presence or otherwise of autocorrelation in our model. When the value of Dw is closer or a little above 2, it means the absence of autocorrelation amongst the explanatory parameters (Koutsoyiannis 1997). From table 4.3 above, it is discovered that the Durbin Watson is (1.6.), and this does satisfy the above stated condition. This means the absence of autocorrelation among the explanatory variables. Finally, the Error Correction Mechanism (ECM) which is used to correct for disequilibrium from of estimated result is ECM (-1) is significant with an appropriate negative sign. Its negative coefficient of (-0.745965) shows that there is a stable long-run equilibrium relationship between the variable. The ECM shows also that changes in the independent variables will cause the dependent variable to converge on its equilibrium path.

Discussion of findings

Government Expenditure on Agriculture: The study found that Government Expenditure on Agriculture has no significant effect on economic growth in Nigeria. The nature of the effect on agriculture has no translated into a meaningful growth in Nigeria. For any country to experience economic growth, investment in agriculture and innovation is inevitable. That is why it's very important for both the public and private sector to motivate people to be innovative. However, diversifying an economy properly in other non-oil sector is likely to influence the economic growth via the following three ways; performance of the agricultural sector, manufacturing sector and solid mineral.

The implication of these findings is that, for agricultural sector to be functional, productive and to achieve their aim and purposes, the agricultural sector need to satisfy the expected needs of the individual, and earn much revenue for government. Agricultural output growth can increase growth in the non-agricultural sector of the economy via diverse means some of which are direct and indirect. This further disagreed with the findings of Idoko, and Jatto, (2018) who found a positive and significant relationship between government expenditure on agriculture and economic growth in Nigeria. The findings also corroborate with the findings of Iganiga and Unemhilin (2011) that Agricultural output is a pertinent determinant to economic performance in Nigeria.

Government Expenditure on education: The study found that government expenditure on education has a insignificant positive effect on economic growth in the Nigeria. The Government spending on education has not spur economic growth from the finding. A nation with highly educated and skilled people would likely enjoy a better economic development. To promote economic growth, factors of production such as capital and labour are used. But the efficient use of labour and capital resources for greater productivity requires that the workers are well trained and skilful. The training and skills acquisition are mainly accumulated through education. Education is an economic good because it is not easily obtainable and therefore need to be apportioned or traded. The implication is that education is essentially the capacity to understand new information and adapt one's behavior accordingly; economies that have the greatest number of highly-skilled workers will more rapidly adopt and implement the most efficient technologies. The finding is not in line with the study of Mohd., Muhammad, and Razak, (2012) government expenditure on health has a positive effect on economic growth of Nigeria.

Government Expenditure on Health: The study found that Government Expenditure on Health in Nigeria. Government spending on health spurs economic growth in Nigeria. Further to this is that healthcare sector output is an endogenous variables and determinants of growth in successive healthcare sector output in Nigeria. This explains that growth and quality of healthcare is an accumulative of efforts and success of previous years. Thus, continuous development in healthcare resources in forms of human capital (personnel) and equipment is apt to growing the Nigerian economy. Thus, the right form of manipulation for health sector will manifested to greater economic growth. However, money supply rightly impacts growth positively but credit to private sector, though positive, had no significant effect in the model. Improved in government spending on health would translate to increased economic growth. Edeme, Emecheta, and Omeje. (2017) corroborates this findings by stating that, public health expenditure and health outcomes have long-run equilibrium relationship. This means that, health system indicators and technological advances may also have impact on health expenditure as has been documented in previous literature.

Government Expenditure on Telecommunication: The study found that government expenditure on telecommunication has a significant positive effect in Nigeria. This implies that a reliable telecommunications networks can improve the productivity and efficiency of other sectors of the economy and enhance the quality of life in generally.

Furthermore, the endogenous influence of telecommunications sector itself ignites positive growth effects on the sector. The individual contributions of the telecommunications sector variables are quiet interesting and the efforts at optimising telecommunications sector output would require to spur growth of the Nigerian economy. Ajiboye (2007) also argued that telephone penetration has a positive impact on gross domestic product (GDP) because it provides a stimulant to economic growth and that as economies become more highly developed, they need more communications.. Nwakanma, Asiegbu, Eze, and Dibia (2015) found that Government Expenditure, Number of Telecom Subscribers and Private Investment collectively have significant impact on Economic growth in Nigeria.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The major tenet of this study is to critically examine the impact of government expenditure on Nigerian economy. The study period spanned from 1987-2019. This study specifically examines the nature of government expenditure on the Nigerian economy. Thus, it was hypothesized that government expenditure has a significant impact on the Nigerian economy.

A linear regression model was employed to analyze the data, The result of our estimated model revealed some important issues that need to be stressed.

- a. It was discovered that government expenditure on agriculture has positive short run effect and insignificant impact on the Nigerian economy.

- b. It was also revealed from the result of our estimated model that government expenditure on education has a positive short run and insignificant impact on the Nigerian economy.
- c. It was also discovered that government expenditure on health has short run positive effect and significant impact on the Nigerian economy.
- d. It was also discovered that government expenditure on telecommunication has short run positive and significant impact on the Nigerian economy
- e. Lastly, our variables when tested for co-integrated using the Johansen co-integration test, were found to be co-integrated and as such the Error Correction Mechanism was employed to correct for the long-run equilibrium relationship between the variables.

In the light of these research findings, the following recommendations are presented.

- i. CBN should do more to encourage borrowing by bringing the lending rate to single digit to boost agricultural production output.
- ii. There is also need for more visible involvement of the private sector in education investment; this can be achieved if the enabling environment and necessary incentives are provided
- iii. The Federal Government of Nigeria (FGN) should increase and restructure the public expenditure allocation to the health sector in order to provide more health facilities, drugs, laboratories, equipment, amongst other things). This can be achieved via the right channeling of funds to the productive arms, adequate management of funds and resources in order to prevent corruption and to aid the development of health services
- iv. It is also recommended that steady power supply be provided by the Nigerian government since that is the major problem facing telecom operators, which in turn will reduce operating cost for the telecom operators as well as reduce the cost of using the services offered by the telecom industry.

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