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An Empirical Analysis of the Causal Relationship between Government Spending and Economic Growth in Nigeria (1985-2015)

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A b s t r a c t

The objective of this paper is to investigate the analysis of the causal relationship between government spending and economic growth in Nigeria during the period "between" 1985-2015. To achieve the goal of this study, Autoregressive Distributed Lag (ARDL) approach to Cointegration and Error Correction Model, developed by Pesaran, Shin and Smith (2001). It also provides empirical illustration on the causal relationship between government spending and economic growth using pair-wise Granger causality test. The results indicate a long-run relationship between economic growth, government capital expenditure, government recurrent expenditure and net export. Also, the study further reveals an insignificant negative impact between government capital expenditure on economic growth. However, the results indicate that there is a positive impact for both government recurrent expenditure and net export on economic growth. However, the Granger causality test result reveals unidirectional causality relationship running from economic growth to government spending in Nigeria. Major findings of this study included that government spending has a mixture of both negative and positive impact on economic growth in the long run. As such, a major challenge before the executive and legislative arms of government to bridge the funding gap in Nigeria. The study therefore recommends that government should intensify effort to ensure that resources are properly managed and invested in productive sectors as well as diversification of the economy so as to raise the level of productive activities and most importantly raise economic growth.

Keywords: RGDP, GCEXP, GREXP, NEXP, GOVS.

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Background to the Study

Nigeria is one of the highly populated economies in the sub-Saharan region of Africa with a population of over 178 million people, according to world meters 2014 data. Nigeria's population is equivalent to 2.46% of the total world population. (World meters 2015). Nigeria is a middle income, mixed economy and emerging market, with expanding financial, service, communications, and technology and entertainment sectors. It is ranked as the 21st largest economy in the world in terms of nominal GDP. It is the largest economy in Africa. The economy is dominated by the production of petroleum, which lies in large reserves below the Niger Delta. The country's oil wealth has financed major investments in infrastructural development. Yet the country remains among the world's poorest countries in terms of per capita income and other development indicators. **(**Uma et al 2013).

A nation may achieve sustainable growth if it utilizes its resources in such a way that it focuses on meeting up with such goals. Nigeria's real GDP rose from ₦23,688,280.33 million in 2000 to ₦69,023,929.94 million in 2012 (CBN 2015).The ability of the government to spend more on meaningful projects may depend on sufficient revenue it generates especially from global connections and intercontinental trade.

Until recently, the oil price in the world oil market has been rising, hence, creating opportunity for oil exporting countries to double and triple their revenues and expenditures. Nigeria is one of such countries that produce and export crude oil. After over fifty years of its independence, Nigeria has been generating about 90% of its revenues from oil especially after 1970s, and has been spending heavily on the economy for sustainable economic growth and development. However, due to inflation, per capita GDP today remains lower than in 1960 when Nigeria declared independence.

Vincent et al (2013) explains that this economic paradox is that the oil sector produces about 90% of export earnings and are in the hands of less than one percent of the Nigerian population dominated by expatriates and members of the political class who control production and the proceeds respectively. Worse still, the sector is disconnected from other tiers and sectors of the economy and thus offers little or no linkage and multiplier effect to the economy as a whole.

Government expenditures play key roles in the operation of all economies. It refers to expenses incurred by the government for the maintenance of itself and provision of public goods, services and works needed to foster or promote economic growth and improve the welfare of people in the society. Government expenditure is an important instrument for government to control the economy. It plays an important role in the functioning of an economy whether developed or underdeveloped. Government expenditure is a major component of national income as seen in the expenditure approach to measuring national income: ($Y = C+I+\mathbf{G}+(X-M)$). This implies that government expenditure is a key determinant of the size of the economy and of economic growth (Aigheyisi 2013).

In the Nigerian economy, government expenditure can broadly be categorized into capital and recurrent expenditure (Okoro 2013). Capital expenditures include the provision of infrastructure such as electricity, transportation, education and health. The expenditure on health and education raises the productivity of labour and increases national output. The recurrent expenditures is government expenses on administration such as wages, salaries, interest on loans, maintenance etc. (Obinna, 2003 found in Okoro, 2013).

In Nigeria, government expenditure does not increase at the same level with economic growth. Following the works of Okoro (2013), between 1980 and 1990, GDP growth rate decreased from 57.15% to 2.87%, government expenditure rate increased from 23.2% to 41.24%. Thus, there is an inverse relationship between the two periods. However, it is found that the growth rate of government expenditure in 2000 and 2010 was 15.53% and 2.15% respectively, while GDP growth rate witnessed 8.79% and 1.54% in the same period respectively; government expenditure growth rate has been greater than GDP growth in the same period.

The research therefore is motivated by the need to cover certain gaps that have been identified from the previous literatures reviewed. These include a review of the current relationship between government spending and economic growth in Nigeria up to 2015 in order to add to the debate on the direction and significance of causality between the variables as no study has so far gone beyond 2013. Also, the net export (that is export less imports) of Nigeria during the 31 year period under study shall be included in the empirical model in ascertaining the causality. This is because net export is one of the components of GDP used to calculate aggregate expenditures in an open economy (of which Nigeria is one) and it has never been captured in the empirical analysis of any study conducted so far. It has also been observed from the literatures reviewed that only very few studies used the ARDL methodology that this research aims at adopting.

Therefore, this study differs from the previous research in several ways. First, the scope of this study will cover up to 2015. Secondly, this study employ the most robust technique of ARDL bound test modeling technique to find the short run as well as the long run estimates of the model as most of the previous studies used simple least square (OLS) method and other conventional cointegration method for their estimation. Thirdly, this study may be different from others in terms of the variables used. These are the gaps the research intends to fill. Therefore, the objectives of this study is to empirically analyse the causal relationships between government spending and economic growth in Nigeria and also to ascertain whether long run relationship exists between government spending and economic growth in Nigeria.

The paper is organized into five sections given the introduction as section one. The rest of the paper is organized as follows: Section two presents the literature review and theoretical framework. In section three, the methodology adopted for this study is presented. Presentation of results is done in section four and conclusion is drawn in section five with policy implication.

Literature Review

Numerous studies have been conducted to examine the causal and significant impact relationship between government spending and economic growth for a long period, Some studies confirm the existence of positive and significant relationship between government spending and economic growth, others revealed evidence of a negative relationship hence giving a stance to the positive relationship hypothesis, (Gorodnichenko, 2010; Ram, 1986; Bose et al., 2007; Gadinabokao & Daw, 2013; Fajingbesin and Odusola, 1999; Chika and Ogugua, 2014). While on the other hand, some studies provide evidence in support of the negative relationship between the two series (Laudau, 1983; Kweka and Morrissey, 2000; Bin Hamzah, 2011; Abu & Abdullahi, 2010; Nurudeen and Usman, 2010; Nasiru, 2012; Fatai, 2015). This might be as a result of the scope of the study, the country being studied, the econometric methodology and models used in the studies. These are some of the factors that gingered this study. Also, the causal nexus between government spending and economic growth has

remained inconclusive (See: Olugbenga and Owoeye, 2007; Younis et al. 2008;Rizvi and Shamam, 2010;Ebaidalla, 2013; Bağdigen and Çetintaş, 2003and Nasiru, 2012).

The linkages between economic growth and government spending, have been studied and discussed by many researchers, some of these among the studies are Loto (2011). A strong linkage was found between government expenditure on economic growth to be negative or not significant. The study by Ihugba (2014) also reflects that a very weak causality exist between total government expenditure and GDP. Scholars like Korman and Brashmasrene, (2007); Donald and Shuggling, (1983) arrived at the conclusion that there exists a positive relationship between government expenditure and national output or growth. Other scholars with similar positions are Alexiou, (2009); Okoro, (2013); Olulu et al, (2014). The study by Yasin (2000) using panel data set from Sub-Saharan Africa by employing Fixed and Random estimation techniques indicated that government spending had positive and significant effect on economic growth.

The methodologies used are mostly OLS, 2LS, conventional cointegration methods (such as, Johansen, Johansen and Juselius, Gregory and Hansen), error correction model and causality tests. A number of empirical studies have reported a strong and positive relationship between government spending and economic growth. However, the causality test results are mixed. The existing literature on Nigerian economy shows that appropriate proxies of government spending are not used along with recent advances in dynamic modeling. There exists a gap in the literature regarding the role of government spending on economic growth in Nigeria. The present study is an attempt to bridge this gap by analyzing the causal relationship between government spending and economic growth using recent advances in dynamic modeling. The results of this study may be helpful for policy makers in designing appropriate policies giving priority to the development of government expenditure.

Theoretical Framework

Theoretical studies identified Wagner (1863)formulated a law known as "Wagner's Law". The theory is often called "law of increasing expansion of public and particularly state activities" The law suggests that, the share of public sector in the economy will rise as economic growth progresses, owing to the intensification of existing activities and extension of new activities. The factors, which contribute to the tendency of increasing public expenditure, relate to a growing role of the state in ever-increasing socio-economic complexities of the modern society. This law therefore, indicates that it is the economic growth that leads to an increase in government expenditure.

Garba and Abdullahi, (2013) cited Ahmad (2007) to have reviewed the works of Keynes (1936) which explained the linkage between public expenditure and economic growth in his Macroeconomic Theory, commonly known as Keynesian Theory. The theory states that whenever there is an increase in investment expenditure either by public or private sector, there will be multiple increases in national income (Jhingan, 1997). In this case, it is government expenditure that leads to economic growth and not the other way round.

The Keynesian theory asserts that government expenditure especially deficit financing could provide short term stimulus to help halt a recession or depression. According to Mitchell (2005), the government should however have policies to reduce expenditure as soon as the economy recovers in order to prevent inflation.

Peacock and Wiseman (1961) both saw taxation as a limitation on government expenditure. The analysis explains that governments like to spend more money and citizens do not like to pay taxes, and government has to pay attention to the needs of the citizens.

As the economy and thus incomes grew, tax revenue and constant tax rate would rise, thereby enabling public expenditure to show a gradual upward trend even though within the economy there might be a divergence between what people regarded as being desirable level of public expenditure and the desirable level of taxation.

Methodology

In this research, a causal analysis of the relationship between government spending and economic growth in Nigeria was analyzed using a data over the period of 1985-2015. This was accomplished by utilizing the econometrics technique of ADF, PP, ARDL-VECM bound cointegration test and Pair wise Granger Causality. The Central Bank of Nigeria (CBN) and National Bureau of statistics(NBS) publishes annual figures for GDP and government spending.

Data Description

Data Set and Model Specification

This study is aimed to find the causal nexus of government spending and economic growth in Nigeria. The variables captured in the model specified for this study are measured as Real Gross Domestic Product (RGDP), Government Recurrent Expenditure (GREXP), Government Capital Expenditure (GCEXP) and Net Export (NEXP). The choice of the data depends largely on the suitability and reliability in the course of this research work. Ehinomen and Daniel (2012) in their study on export and economic growth in Nigeria support the investment into the export sector.

Estimation Procedure and Robustness Test

The analysis begins with ascertaining the order of integration of the variables. The procedure adopted in this study involves the use of the Augmented Dickey Fuller Test (1979) ADF Test and Phillips-Perron (1988) PP Test. The null hypothesis of both the ADF and PP tests are non-stationarity, thus failure with respect to rejection implies unit root in the series. Following these unit root tests, the Autoregressive Distributed Lag (ARDL) bound cointegration Models as well as Error Correction Model is employed to examine the presence of any long-run association among the variables. To account for the sensitivity of results using this approach to cointegration to the automatic choice of lag length, the Schwarz Information Criterion (SIC) is used. Since it has been discovered there is cointegration among the variables which suggests that there must be Granger causality in at least one direction, however, it does not indicate the direction of causality among the variables. Therefore, the Pair-wise Granger causality test has been applied to test for causality between government spending and economic growth.

The analysis of the data has been done using the EVIEWS 9 econometric package.

Econometric Methodology

ADF and Phillip-Perron Unit Root Tests

Consider a variable Y that has unit root represented by a first-order autoregressive AR (1):

$$\Delta Y_t = \alpha + \beta Y_{t-1} + \sum_{j=i}^{p} y_j + \Delta Y_{t-j} + \varepsilon_t \text{ ....(1)}$$

$$\Delta Y_t = \alpha + \beta T + \gamma y_{t-1} + \varepsilon_t \text{ ....(2)}$$

Where α and β are parameters, ε_t is assumed to be a white noise, ΔY_{t-j} expresses the first difference of the variable with p lag, $\Delta Y_t = Y_t - Y_{t-1.}$ Y is a stationary series if $-1 < p < 1$. If $p = 1$, y is a non-stationary series; if the process is started at some point, the variance of y increases steadily with time and goes to infinity. If the absolute value of p is greater than one, the series is explosive.

Cointegration – ARDL-Bounds Testing Procedure

In this regard, by applying the model suggested by Pesaran et al. (2001) the recently developed Autoregressive Distributed Lag (ARDL)-Bounds testing approach is used to examine the long-run relationship between government capital expenditure, government recurrent expenditure, net exportand economic growth. The ARDL modelling approach was originally introduced by Pesaran and Shin (1999) and later extended by Pesaran et al. (2001).

$$\Delta LRGDP_t = \alpha_o + \alpha_1 LRGDPt_{-i} + \alpha_2 LGCEXPt_{-i} + \alpha_3 LGREXP_{t-i} + \alpha_4 LNEXP_{t-i} + \sum b_1 \Delta LGDP_{t-I} + \sum b_2 \Delta LGCEXP_{t-I} + \sum b_3 \Delta LGREXP_{t-i} + \sum b_4 \Delta LNEXP_{t-i} + \psi ECM_{t-I+} \varepsilon_{t1} \ldots\ldots\ldots (3)$$

In the above equation, LRGDP= natural logarithm value of real growth domestic product as a proxy for economic growth; α_0 = constant parameter, Δ= denotes the difference operator, ∑bi= vector of the coefficients of the variables in the model, ε= represents the white noise error term; Δ represents the first difference operator. The parameters b's are the short-run coefficients and α's are the corresponding long-run multipliers of the underlying ARDL model.

i.e. The null hypothesis in the equation is $H_0 : \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = 0$. This indicates the absence of a long run relationship and the alternative hypothesis $H_1: \alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq 0$

The bounds testing procedure is based on the joint F-statistic (or Wald statistic) for cointegration analysis. The asymptotic distribution of the F- statistic is non-standard under the null hypothesis of no cointegration between examined variables. Pesaran et al. (2001) report two sets of critical values for a given significance level. One set of critical values assumes that all variables included in the ARDL model are I(0), while the other is calculated on the assumption that the variables are I(1). If the computed test statistic exceeds the upper critical bounds value, then the Ho hypothesis is rejected. If the F-statistic falls into the bounds then the cointegration test becomes inconclusive. If the F-statistic is lower than the lower bounds value, then the null hypothesis of no cointegration cannot be rejected (Pesaran et al. (2001).

Granger Non-Causality Test

The causal relationship between government spending and economic growth has been examined using Granger causality test. In a causality test, the direction of causality are reported in four different ways; when causality runs for example from RGDP to GOVS meaning that RGDP Granger cause GOVS, It could also be the case where GOVS Granger cause RGDP when causality runs from GOVS to RGDP. In contrary, RGDP and GOVS may cause each other or is the reverse the case (Younis et al., 2008). This is done using the following VAR system of equations as follows:

$$LRGDP_t = \alpha_{0+} \sum \alpha_1 LGDPt\text{-}1 + \sum \alpha_2 LRGDPt\text{-}1 + \sum \delta_1 GOVS_{t-1+} \sum \delta_2 LGOVSt\text{-}1 + \mu 2t \ldots\ldots\ldots (4)$$

$$LGOVSt = \alpha_{0+} \sum \delta\beta_1 LGOVS_{t-1+} \sum \delta\beta_2 LGOVSt\text{-}1 + \sum \gamma_1 LRGDPt\text{-}1 + \sum \gamma_2 LRGDPt\text{-}1 + \mu 2t \ldots. (5)$$

Where:
α_0 = constant parameter
α = vector of the parameters of the lagged values of the natural logarithms value of RGDP
δ=vector of the parameters of the lagged values of the natural logarithms value of GOVS
β=vector of the parameters of the lagged values of the natural logarithms value of GOVS
γ=vector of the parameters of the lagged values of the natural logarithms value RGDP

Empirical Results and Discussion

i. Unit root results

Before performing the Bounds test, it is essential to check for the stationarity of the data series to be used. The test is conducted using three different unit root models. That is, the Augmented Dickey Fuller (ADF) and Philips-Perron (PP) models. The essence of using the three test is for confirmatory testing and the result of the unit root test is shown in table 1a and 1b below:

Table 1: Results of ADF and PP Unit Root Tests 1985 - 2015.

Variables	ADF Test			PP Test		
	@Level	@Difference	Status	@Level	@Difference	Status
LRGDP	-3.922629*	-14.98095*	I(0)	-3.459888**	-12.78218*	I(0)
LGCEXP	-2.224605	-6.014502*	I(1)	-2.402324	-5.970180*	I(1)
LGREXP	-2.966664***	-7.638266*	I(0)	-4.097982*	-7.581719*	I(0)
LNEXP	-1.686222	-5.312297*	I(1)	-1.614116	-7.381700*	I(1)

Source: Authors' computation using EVIEWS 9 software.
* indicates level of significance at 1%, ** at 5% and ***10%.

The results of unit root tests on the variables at their level and first difference values has been conducted., the degree of integration is confirmed through ADF and PP.The summary of the result reveals that government capital expenditure and net export are non-stationary in the level values while economic growth and government recurrent expenditure were found to be stationary at 1% and 10% critical level in ADF test, while 5% and 1% critical level in PP test. However, the stationarity property is found after taking the first difference of the two variables at 1% critical level.

Cointegration Analysis of Government Spending/Economic growth

Having established the unit root properties of the variables, the combination of non-stationary variables could however be stationary if these series share a common long-run equilibrium relationship. In this case, these variables are said to be cointegrated. Thus, given the time series characteristics of the variables, this study further investigates employing automatic inbuilt Asymptotic critical values of F-statistics test, 10%, 5%, 2.5% and 1% in E-view 9 by comparing asymptotic lower critical bound I(0) and upper critical bound I(1) values using ARDL methodology proposed by Pesaran et al. (2001). Hence, the result of the Bound F-Test for co-integration (that is the existence of a long term linear relation) is established in the table 2 below:

Table 2 Bounds F-Test for Cointegration 1985-2015.

Dependent variable	Function		F-Statistic
LRGDP	FLRGDP (LRGDP | LGCEXP,LGREXP,NEXP)		5.749382*
	Asymptotic critical value		
Significance	I(0) Bound	I(1) Bound	
10%	2.37	3.2	
5%	2.79	3.67	
2.5%	3.15	4.08	
1%	3.65	4.66	

Source: Authors' computation using EVIEWS 9 software
*indicates the level of significance at 1%, ** 2.5%, ***5% and ****10%.

The results of the bounds test for cointegration alongside with critical values are reported in Table 2. The bounds test indicates that cointegration is only present when natural logarithm of economic growth proxy with RGDP is the dependent variable and the long run forcing variables are capital expenditure, recurrent expenditure and net export. This is because the computed F-statistics F_{LRGDP}(LRGDP | GCEXP,GREXP,NEXP) is 5.749382, which is higher than the upper bound critical value at 1% significance level, suggesting the rejection of the null hypothesis that there is no long run relationship between capital expenditure, recurrent expenditure, net export and economic growth.

Analysis of Long Run Impact of Government Spending on Economic Growth (RGDP)
This table presents the long run coefficients/multipliers of government spending on RGDP.

Table 3 Results of Estimated Long-Run Coefficients Using ARDL Approach

Regressor	Coefficient	Std Error	T-ratio	P-value
Dependent variable; LRGDP				
LGCEXP	-0.106362	0.121057	-0.878605	0.3896
LGREXP	0.279639	0.096396	2.900934	0.0085
LNEXP	0.024270	0.053873	0.450500	0.6570
C	04.975194	0.148851	33.424088	0.0000

Source; *Authors'* computation using EVIEWS 9 software.

Having determined the existence of a long run equilibrium when RGDP serves as dependent variable, the long run coefficients and short run coefficients are estimated using the associated ARDL and ECM. The ARDL model is estimated by automatic selection of maximum lag length of 4 and using Akaike information criteria in selecting the optimum lag order for the model. The specification finally selected is ARDL (3,0,0,0), the derived long run elasticities are presented in Table 3. Based on Table 3, the long run impact of capital expenditure on economic growth is around -0.106 and statistically insignificant, meaning that an increase in capital expenditure will decrease 10.6% in RGDP. The long run impact of recurrent expenditure and net export on RGDP are 0.279 and 0.024 respectively. However, recurrent expenditure is statistically significant at 1% level, while net export is not significant. Therefore, 1% increase in recurrent expenditure will increase RGDP to Nigeria by 27.9%. Similarly, an increase in net export will increase 2.4% in RGDP in Nigeria.

Analysis of the Short Run Analysis of Government Spending on Economic Growth
Table 4 Error Correction Representation for the Selected ARDL Model

Regressor	Coefficient	Std Error	T-ratio	p-value
Dependent Variable: Δ(LRGDP)				
Δ(LGCEXP)	-0.103689	0.180158	-0.575545	0.5710
Δ(LGREXP)	0.187630	0.188059	0.997720	0.3298
Δ(LNEXP)	0.037145	0.047776	0.777475	0.4455
CointEq(-1)	-0.956868	0.228248	-5.506588	0.0000

Source: Authors' computation using EVIEWS 9 software.
*indicates the level of significance at 1%, **5% and ***10% .

The results of the short run dynamic coefficients associated with the long run relationships obtained from the cointegrated equation (error correction model) are presented in Table 4. The signs of the analysis impacts are maintained to the long run. Again, all the independent variables were not significant and also government capital expenditure shows a negative impact on economic growth. However, both government recurrent expenditure and net export have positive impact on economic growth in both the short run and long run The error correction coefficient, estimated -0.956 (0.0000) is highly significant, has the correct sign, and imply a fairly high speed of adjustment to equilibrium after a shock. Approximately 96% of disequilibria from the previous year's shock converge back to the long run equilibrium in the current year.

Analysis of Causal Nexus of (GOVS) and Economic Growth
Granger Causality Test
Granger causality had therefore been employed in 'first difference' on the dependent variable (LRGDP) and the independent variables (LGCEXP, LGREXP, LNEXP). The results are presented in Table 4.2.7

Table 5 Results of Granger Causality Tests

Null Hypothesis	Lags	Obs	F-statistic	p-value
LGCEXP does not Granger cause LRGDP	2	29	0.35362	0.7057
LRGDP does not Granger cause LGCEXP	2	29	3.15227	0.0609
LGREXP does not Granger cause LRGDP	2	29	1.16058	0.3303
LRGDP does not Granger cause LGREXP	2	29	4.00947	0.0066
LNEXP does not Granger cause LRGDP	2	29	0.59774	0.5580
LRGDP does not Granger cause LNEXP	2	29	1.25110	0.3042
LGREXP does not Granger cause LGCEXP	2	29	1.32663	0.2841
LGCEXP does not Granger cause LGREXP	2	29	1.74760	0.1956
LNEXP does not Granger cause LGCEXP	2	29	0.06205	0.9400
LGCEXP does not Granger cause LNEXP	2	29	3.43764	0.0487
LNEXP does not Granger cause LGREXP	2	29	0.72229	0.4959
LGREXP does not Granger cause LNEXP	2	29	9.61446	0.0009

Source: Authors' computation using EVIEWS 9 Software.

From the result of the Granger causality test in Table 5, it was revealed that a unidirectional causality run from LRGDP to LGCEXP, LRGDP to LGREXP, LGCEXP to LNEXP and LGREXP to LNEXP. This result is in line with Olugbenga and Owoeye (2007), Younis et al

(2008), Rizvi and Shamam, (2010) and Ebaidalla (2013). The decision on the direction of causality was made from the probability value of the test. On the other hand, the result reveals no bidirectional causal relationship exist among all the variables under consideration. This confirms the result findings of Bağdigen and Çetintaş (2003) and Nasiru (2012) in the case of Nigeria. This implies that changes in the past values of LRGDP can be used to explain changes in the present value of LGCEXP and LGREXP in Nigeria. Also, changes in the past values of LGCEXP and LGREXP can be used to explain changes in the present value of LNEXP in Nigeria. This explains the reason for the low level of LRGDP (economic growth) in Nigeria. Government capital expenditure therefore has negative impact on economic growth in Nigeria.

Conclusion and Policy Recommendations

The main objective of the study is to empirically analyse the causal relationships between government spending and economic growth in Nigeria and also to ascertain whether long run relationship exists between government spending and economic growth in Nigeria using annual time series data over the period of 1985 to 2015.An ARDL-VECM bound cointegration testing procedure that allows testing for a level relationship irrespective of the order of integration of the underlying series has been applied on the data. The results of this study are found that government capital expenditure, government recurrent expenditure and net export can be treated as the 'long run forcing' variable explaining economic growth in Nigeria. In other words, there is long run relationship between government capital expenditure, government recurrent expenditure and net export and economic growth in Nigeria.

Also, causal relationship between economic growth and government spending is unidirectional, implying that it is economic growth that affects government spending and not the other way round. Similarly, causal relationship between government capital expenditure, government recurrent expenditure and net export is unidirectional, also implying that it is net export that affects government spending and not the other way round in Nigeria. However, unidirectional causality that runs from real GDP (economic growth) to government spending (capital and recurrent expenditures) in support of famous Wagner's Law (1813) postulate of Ever Increasing State Activity. This implies that the study contradict Keynesian (1936) view of government active role in the economy using various policy instruments. Thus, empirical findings of the study reject the null hypothesis that says there is no causality between public expenditure and economic growth in Nigeria. Lastly, the explanatory variables, i.e. government capital expenditure observed a negative and insignificant impact on economic growth in Nigeria, whereas government recurrent expenditure and net export shows positive and insignificant influence on economic growth in Nigeria. It also show that, given the Wagner's Law, in the short run government capital expenditure have negative and insignificant impact on economic growth in Nigeria; while, government recurrent expenditure have a positive and significant impact on economic growth in Nigeria. This implies that recurrent expenditure have strong positive impact on economic growth of Nigeria than capital expenditure. This could be as a result of missing expenditure between release and execution of capital projects in Nigeria especially during this democratic dispensation where corruption has eaten deep into the fabric of Nigerian society.

The study therefore recommends that government should intensify effort to ensure that resources are properly managed and invested in productive sectors as well as diversification of the economy so as to raise the level of productive activities and most importantly raise economic growth. There should be joint partnership between the government and the private

sector in providing essential infrastructural services that will promote economic growth and development. Government should boost spending on capital or developmental projects. By doing this, jobs would be created, the economy would grow and poverty would decline. The manufacturing sub-sector should be provided with resources like electricity, road infrastructure, long- and medium-term credit facilities, and enabling business environment in order to boost production for export, and possibly help in the manufacture of some goods that are presently imported.

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