Does Recurrent Expenditure Drive Growth In Nigeria?

A Cointegrated Var Approach.

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Abstract: *This study 'Does government recurrent expenditure drive growth in Nigeria'? found the absence of multicolinearity and heteroskesdasticity with no serial correlation. The data employed showed that the variables are differenced once to be statationary using Augmented Dickey Fuller unit root test. Johansen Cointegration Test found long run relationships existing between growth of the economy (Gross Domestic Product) and Recurrent Expenditure variables. The result of Ordinary Least Square found positive and significant relationship between the dependent and independent variables, except administration that has negative relationship. The speed of adjustment was found to be 40.18%. That means short term errors can be corrected in the long run with annual speed of adjustment of 40.18%.VAR Granger Causality/Block Exogeneity Wald Tests found unidirectional effect with the variables, except social and community services that has a bidirectional effect or feedback effect. Therefore, the researchers suggest adequate funding of economic services and social and community services due to their positive contributions to the expansion of the growth of Nigerian economy.*

Key words: *Economic growth, Government Recurrent Expenditure, VECM, Impulse Responses.*

1. Introduction

Nigerian recurrent expenditure stood at N4.85billion in 1981, increased to ₦36.22 billion in 1990, then ₦127.63 billion in 1995. It was ₦178.10 billion in 1998. Then on return to democracy in 1999, there was astronomical rise to ₦449.66 billion. In 2003, it stood at ₦984.3 billion to ₦1110.64 billion in 2004, and then almost doubled the figure in 2008 with ₦2117.36 billion. In 2012, it started with ₦4004.46 billion to ₦4892.36 billion in 2015, rose to ₦5762.7 billion in 2016, then up to ₦7138.7 billion in 2017 (CBN, 2017).

While, 1981 the Gross Domestic Produt growth rate was 57.15% in 1981 to -1.79% in 1982, then to -7.58% in 1983, then rose to 11.63% in 1990 and down to -0.55% in 1991 and increased to 2.5% in 1998. Then on return to democracy in 1999, it moved up by 0.52%, then up to 5.52% in 2000 to its peak of 14.6% in 2002. Then slightly came down to 10.44% in 2004, with average of 6.42% from 2005-2015 and recorded -1.58% in 2016, then rose 0.82% in 2017(NBS, 2018).

From the above, it can easily be adduced that both government expenditure and growth are not moving in the same frequency. That means government expenditure in Nigeria seems not to drive a commensurate growth. In the words of Okoro (2013), the rising government expenditure may not have translated to meaningful growth and development, as Nigeria ranks among the poorest countries in the world.

These situation cast doubt on whether government recurrent expenditure is in manner it can drive growth in Nigerian economy, hence subjected to empirical investigation in order to ascertain the concern of this study.

2. Literature Review

2.1 Conceptual Review

Njoku (2009), government expenditure refers to all expenditures which government incurs in the course of performing its functions. Thus, government expenditure has two components namely recurrent expenditure and capital expenditure. While recurrent expenditure encompasses expenditures recurring over the year such as personnel costs, transportation, utility services, telephone services, stationery, hospitality, maintenance of office furniture and equipment all other day to day, month to month or quarterly

running expenses funded by the government, capital expenditure involves expenditure on construction, land extension, building and plant and machinery acquisition.

In the words of Okpara (2002) Public expenditure represents the funds expended by the government for its own maintenance, the maintenance of the society and the running of the economy in general. Bhatia (2002) added that apart from maintenance of the economy and society, expenditure of the government extends to helping other countries. Government spending reflects the thrust of the regime in power. Once the government has decided the type and amount of goods and services to be purchased, government spending represents the cost of carrying out these policies.

Anyanwu (1977) contended that public expenditure simply means government spending out of public revenues derived from taxes and other sources. It involves all the expenses for its own maintenance, for the benefit of external bodies and other countries and for settling Nigeria's foreign and international obligations.

2.2 Theoretical Literature

The following theories are reviewed to enhance more understanding on relationship between government expenditure and economic growth.

Wagner's law of Increasing State Activity: Wagner (1911) was a German political economist who based his law on increasing state activities and historical facts, primarily in Germany. He studied the German economy overtime and observed a correlation growth between national output and the public expenditure in the economy. He expressed the view that there was an inherent tendency for the activities of different layers of government (such as central and state governments) to increase both intensively and extensively. That is, there is a functional relationship between the growth of an economy and the growth of government activities, so that the government sector grows faster than the economy.

Keynesian Hypothesis- Economic Growth Theory: Keynesian public expenditure- economic growth theory has attracted a vast array of empirical investigation by economists especially from academic setting over time. Keynesians" in other hand postulates a function with the orientation that runs from government increasing undertakings to economic improvements. These expenditures are considered as normal goods in society's stance with income elasticity of demand greater than one. Keynesian's stance evolved at the hill of the Great depression of late 1930s. This advocating for government involvement in the economic managements brought about, a tremendous evolution in the field of economic. The periods witness a considerable growth on sensitive economic indicators such as investments, employment creation, and general demands whereof government spending (Musgrave and Musgrave, 1989).

Peacock-Wiseman Hypothesis or displacement Effect: In their study of the U.K economy between 1890 and 1955, Peacock and Wiseman (1961) concluded that public expenditure do not increase in a smooth and continuous manner but in jerks or step-like fashion. Peacock and Wiseman's hypothesis is popularly referred to as displacement effect hypothesis. They believe that the pattern of growth of public expenditure in Britain is less regular and quite different from the corresponding pattern of growth in the size of the national output as proposed by Wagner.

2.3 Empirical Review

Appah and Ateboh-Briggs (2013) investigated the co integration patterns of public expenditure and growth in Nigeria for the period 1961-2010 employed VECM and other Diagnostic tests. The results from econometric analysis revealed that pattern of public expenditure of administration, social community series, economic services and transfers affects the economic growth of Nigeria.

Okanta (2009) in a study, the impact of public education expenditure on Economic growth in Nigeria (1990-2008), using simple, bivariate regressions shows that public education expenditures are statistically significant in affecting real GPD and real per capita in Nigeria. Also, that expenditure is not statistically significant in influencing economic growth using multivariate regression.

Okoro (2013) studied the impact of government spending on the Nigerian economic growth using Granger causality test, cointegration and VECM technique on time series data spanning 1980 -2011. The result from the estimation shows that there exists a long-run equilibrium relationship between public expenditure and economic growth in Nigeria, supporting the Keynesian hypothesis. The short-run dynamics adjusts to long-run equilibrium at the rate of 60% per annum. The policy implication of this finding is that both the short-run and long-run expenditure has a significant effect on economic growth of Nigeria.

Equally, Sevitenyi (2012) analyzed the relationship and the direction of causality between public spending and economic growth in Nigeria by adopting a Granger causality test using annual time series data from 1961 to 2009. Aggregate government expenditure is disaggregated into recurrent expenditure, capital expenditure, administration, social and community services, economic services and transfers. Finding revealed that there is a unidirectional causality running from aggregate public spending to economic growth, which supports the Keynesian hypothesis. Moreover, at the disaggregate level, results show that all the variables except recurrent expenditure cause economic growth, implying that government expenditure promotes growth in Nigeria. In general, this result does not empirically support the existence of Wagner's law both at the aggregate and disaggregate level.

Taiwo and Abayomi (2012) examined government expenditure and economic development: Empirical evidence from Nigeria over the last decades (1970-2008) using econometrics model with OLS techniques. They found that there is a positive relationship between real GDP as against the recurrent and capital expenditure.

Edame and Akpan (2013) examined empirically the structure of government expenditure and economic growth of government of Nigeria with time series data for the period of 1970 to 2009. The OLS regression technique was employed as the main method of data estimation. The result obtained revealed that factors such as fiscal deficit, GDP, Government revenue and debt servicing are some of the factors causing growth in the government expenditure in Nigeria for the reference period.

In addition, Egunjobi (2013) examined the pattern of public expenditure in Nigeria using error correction model and granger causality test from 1977 to 2008, the study supported that government spending and public consumption impact negatively on economic growth in Nigeria. Also, a unidirectional causality exists between economic growth and total expenditure, while there was no causal relationship between private investment and public investment.

Similarly, Aruwa (2012) examined the causal relationship between government expenditure and economic growth in Nigeria from 1979 to 2008 using a VAR- based error correction model. Result among other things shows that an increase in both real gross domestic product and public revenue causes growth in government expenditure, hence indicating the presence of Wagner's hypothesis in Nigeria during the review period.

Also, Ifarajimi and Ola (2017) examined the relationship between government expenditure and economic growth. The study made use of time series data on government expenditure on administration, economic services, social and community services, transfers, government total revenue, nominal exchange rate and real per capital GDP for the period of 1981 to 2015, using ECM computed through Dynamic OLS and found that long run government expenditure on administration and nominal exchange rate were significant and therefore impact significantly on economic growth in Nigeria.

Miftahu and Rosni (2017) investigated public sector spending and economic growth in Nigeria: In search of a stable relationship employed ARDL model. The model revealed the existence of positive and significant relationship between public spending and economic growth in Nigeria. From the findings, it is evidence that government expenditure are considered to be highly important in creating opportunities and widening the productive base at which developing countries can grow, Nigeria is inclusive.

Danladi, Akomolafe and Anyadiegwu (2015) examined government expenditure and its implication for economic growth: Evidence from Nigeria. The ARDL methodology was employed to examine the relationship between the variables. From the analysis and findings, government spending significantly and positively explained the economic growth of the country. In comparing the results of the total government expenditure in the capital and recurrent expenditure, the result shows that they are positively related to economic growth however the recurrent component of expenditure significantly explained more. This study attests to the keynesian model (1936) of government intervention in the economy.

Oziengbe (2013) investigated the relative impacts of federal capital and recurrent expenditures on Nigeria's economy (1980-2011). The study employed ECM model and revealed that total government expenditure had significant positive effect on Nigeria's economy in the period covered. It confirms postulation of keynesian theory and implies that Nigeria economy at its current stage of development owes much to government spending

Akanbi (2014) in his work, Government expenditure in Nigeria: Determinants and the trends employed a public choice framework and the model is estimated in the time series data from 1974 to 2012, using the Johansen estimation techniques. The results show that capital and recurrent expenditure are resilient to shocks in total government spending and, similarly, total government expenditure is found to be resilient to shocks in capital and recurrent spending. The increased per capita income was found to be in support of the Wagner's law in total and capital expenditure specifications, but this was refuted by the recurrent expenditure specification.

 Ditimi, Nwosa, and Ajisafe (2011) investigated the relationship between the components of government expenditure (that is, education, agriculture, health and transport and telecommunication) on economic growth in Nigeria for the period spanning 1970 to

2010. The results of the long run and short run regression estimates confirmed that expenditure on agriculture was the most significant component of government expenditure which impacted on economic growth.

Chude and Chude (2013) investigated the effect of public expenditure in education on economic growth in Nigeria over a period from 1977 to 2012, with particular focus on disaggregated and sectoral expenditure analysis. The study used ECM and the results indicated that total expenditure on education is highly and statistically significant and have positive relationship on economic growth in Nigeria in the long run.

Yusuf, Babalola, Aninka and Solako (2015) used Autoregressive Distributed Lag Model (Bound Test Approach) on Analysis of impact of sectoral Government Expenditure on Economy in Nigeria. Bound test co-integration approach revealed that public expenditures have not performed well to the expectation in promoting the economic growth. Contrarily to expectation, government expenditures on the Education, Defense and Agriculture sectors have failed to promote the economic growth.

Tajudeen and Ismail (2013) used Auto-Regressive Distributed Lag (ARDL) approach to analyse the impact of public expenditure and economic growth from 1970-2010. Their findings indicated that the impact of public spending on growth was negative and recurrent expenditure was also found to have little significant positive impact on growth.

3 Materials and Methods

Data for government recurrent expenditure (Administration, Community and Social Service, Economic Services, Transfers) and economic growth proxied by Gross Domestic Product were collected from Central Bank of Nigeria (CBN) Statistical Bulletin of 2017.

We employed the following econometric tools; serial correlation LM, heteroscedasticity, normality, multicolinearity, inverse root of characteristic, unit root stationarity among others. Employment was made of VEC Granger Causality/Block Exogeneity Wald tests, Johansen Cointegration, Vector Error Correction Model (VECM), Cholesky Impulse Response and Variance Decomposition analysis to determine the full Causality implications of the variables in the model. The least squares were applied to test the contemporaneous and long run relationship.

3.1 Model Specification

The model will be specified as follows;

$$GDP = \alpha_{01} + \alpha_{11}GDP_{t-1} + \alpha_{21}Admin_{t-1} + \alpha_{31}Comserv_{t-1} + \alpha_{41}Ecoserv_{t-1} + \alpha_{51}Trans_{t-1} + U_1 \qquad (1)$$

$$Admin = \beta_{02} + \beta_{12}GDP_{t-1} + \beta_{22}Admin_{t-1} + \beta_{32}Comserv_{t-1} + \beta_{42}Ecoserv_{t-1} + \beta_{52}Trans_{t-1} + U_2 \qquad (2)$$

$$Comserv = \Upsilon_{03} + \Upsilon_{13}GDP_{t-1} + \Upsilon_{23}Admin_{t-1} + \Upsilon_{33}Comserv_{t-1} + \Upsilon_{43}Ecoserv_{t-1} + \Upsilon_{53}Trans_{t-1} + U_3 \qquad (3)$$

$$Ecoserv = Z_{04} + Z_{14}GDP_{t-1} + Z_{24}Admin_{t-1} + Z_{34}Comserv_{t-1} + Z_{44}Ecoserv_{t-1} + Z_{54}Trans_{t-1} + U_4 \qquad (4)$$

$$Trans = X_{05} + X_{15}GDP_{t-1} + X_{25}Admin_{t-1} + X_{35}Comserv_{t-1} + X_{45}Ecoserv_{t-1} + X_{55}Trans_{t-1} + U_5 \qquad (5)$$
 Where;

GDP = Gross Domestic Product

Admin = Expenditure on government such as general administration, defense,   internal security and national assembly.

Comserv = Expenditure on provision of social and community services such as   education, health, and other social and community services

Ecoserv = Expenditure on provision of economic services such as agriculture, construction, transportation & communication and other economic services.

Trans =Expenditure on public debt servicing, pension and gratuities, contingencies/subventions.

3.2 Apriori Expectation

It is expected that GDP = f(Admin, Comserv, Ecoserv, Trans), **f₁,f₂, f₃, f₄>0. f₁,f₂, f₃, f₄** are the coefficients of Comserv, Ecoserv and Trans respectively. It is expected that the more expenditure government makes sincerely and appropriately on them, the more the economy expands, hence growth in the economy.

4 Results and Analysis

Residual Correlation Matrix

	GDP	ADMIN	COMSERV	ECOSERV	TRANS
GDP	1.000000	0.892954	0.859321	0.717526	0.865282
ADMIN	0.892954	1.000000	0.955979	0.518923	0.76611
COMSERV	0.859321	0.955979	1.000000	0.334315	0.742592
ECOSERV	0.717526	0.518923	0.334315	1.000000	0.527469
TRANS	0.865282	0.76611	0.742592	0.527469	1.000000

Table above, presents the correlation matrix of variables. From the table, the correlation between ADMINand GDP is 0.892954 that between COMSERV and ADMIN is 0.955979, ECOSERV and COMSERV is 0.334315. TRANS and ECOSERV is 0.527469. In some, none of the pairs of correlations among the independent variables is linearly perfectly correlated i.e. there is no presence of multi-colinearity.

Augmented Dickey-Fuller Unit Root Test

Variables	lag	1st difference	1ˢᵗ diff. Probility	Order of Integration
LGDP	0	-5.423279	0.0001	1(1)
LADMIN	0	-7.440819	0.0000	1(1)
LCOMSERV	0	-7.066199	0.0000	1(1)
LECOSERV	0	-6.227349	0.0000	1(1)
LTRANS	0	-7.512799	0.0000	1(1)

The above table shows that all the series are more negative than their 1 percent critical value and far more than that of 5 and 10 percent at first difference. This implies that the series are differenced once for them to be stationary. They are therefore said to be integrated of order one. Therefore, we proceed to determine the if long run relationship exist between economic growth (GD) and recurrent expenditure variables (Admin, Comserv, Ecoserv and Trans).

Johansen Cointegration

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	1.000000	1313.744	69.81889	1.0000
At most 1 *	0.622085	66.40720	47.85613	0.0004
At most 2 *	0.528375	32.34917	29.79707	0.0249
At most 3	0.145784	6.044192	15.49471	0.6903
At most 4	0.015006	0.529191	3.841466	0.4669

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

From the table above, the result shows that 3 components of the trace statistics are greater than the critical values at 5% level and as such, indicates 3 co-integrating equation at the 5% level. This implies that there exist long run relationship between GDP and Recurrent Expenditure variables; Administration (Admin), Social and community services (Comserv), Economic services (Ecoserv) and Transfers (Trans). Having established a long run relationship between the GDP and Recurrent Expenditure; Administration

(Admin), Social and community services (Comserv), Economic services (Ecoserv) and Transfers (Trans), the researchers employed the Ordinary Least Square (OLS) Method to determine the predictions of recurrent expenditure variables on GDP. The results of the analysis are presented in table as follows:

Ordinary Least Square (OLS) Method

Dependent Variable: GDP
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	473.9944	1033.967	0.458423	0.6497
ADMIN	-44.47526	8.730600	-5.094182	0.0000
COMSERV	126.7693	12.79656	9.906513	0.0000
ECOSERV	43.99876	3.051696	14.41781	0.0000
TRANS	9.719258	1.500990	6.475230	0.0000

R-squared	0.983572	Mean dependent var	22679.98
Adjusted R-squared	0.981518	S.D. dependent var	34219.67
S.E. of regression	4652.094	Akaike info criterion	19.85311
Sum squared resid	6.93E+08	Schwarz criterion	20.07080
Log likelihood	-362.2826	Hannan-Quinn criter.	19.92986
F-statistic	478.9644	Durbin-Watson stat	1.514642
Prob(F-statistic)	0.000000		

The result of table above confirms that recurrent expenditure on Social and Community Services and Economic Services and Transfers exert positive and significant impact on the growth of the economy while recurrent expenditure on Administration impact negative and significant on the growth of the economy. The model is well fitted (R^2 = 98.3%) with no autocorrelation (Dw=1.514642). The result of OLS model reveals that the adjusted coefficient of determination is 0.98 implying that the government recurrent expenditure explains about 98 % of the variation in economic growth in Nigeria. The F-statistic 478.9644 with P-value og 0.000000 shows overal significance. The researchers therefore conclude that recurrent expenditure on Admin, Comserv, Ecoserv and Trans are good predictors of economic growth (GDP).

VAR Lag Order Selection Criteria

Endogenous variables: LGDP LADMIN LCOMSERV LECOSERV LTRANS
Exogenous variables: LGDP
Included observations: 34

Lag	LogL	LR	FPE	AIC	SC	HQ
0	992.2291	NA*	4.14e-32*	-58.07230*	-57.84784*	-57.99575*
1	909.5153	-136.2346	2.38e-29	-51.73619	-50.38941	-51.27690
2	907.2594	-3.052120	1.31e-28	-50.13290	-47.66379	-49.29087
3	912.1844	5.214759	5.66e-28	-48.95203	-45.36059	-47.72724

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

The VAR lag order selection criteria on table above shows that lag length of 1 is selected at 5% level based on sequential modified LR test statistic, Final prediction error (FPE), Akaike information criterion (AIC), Schwarz information criterion (SC) and Hannan-Quinn information criterion (HQ).

Inverse Roots of AR Characteristic Polynomial

Inverse Roots of AR Characteristic Polynomial
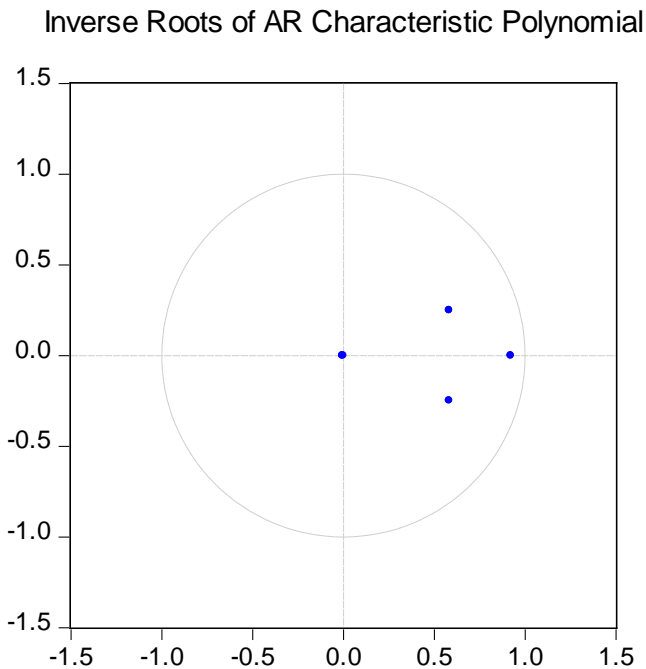
Also Figure above shows that all np roots of the characteristics polynomial are in circle or lie within the unit imaginery circle (modulus). Hence, all are stationary.

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.915107	Prob. F(2,30)	0.0697
Obs*R-squared	6.020559	Prob. Chi-Square(2)	0.0493

Table above shows that F-statistis is 2.915107 wtih P-value of 0.0697, meaning rejection of the null hypothesis. Hence, no serial correlation.

VAR Residual Heteroskedasticity Tests (Levels and Squares)
Included observations: 35

Joint test:

Chi-sq	df	Prob.
316.6570	300	0.2436

In the same vein shows that Chi-sq is 316.6570 wtih P-value of 0.2436, meaning rejection of the null hypothesis. Hence, the model is homoskedastic.

Heteroskedasticity Test: ARCH

F-statistic	3.636319	Prob. F(1,34)	0.0650
Obs*R-squared	3.478222	Prob. Chi-Square(1)	0.0622

In the same vein Table above shows that F-statistis is 0.3.636319 with P-value of 0.0, meaning rejection of the null hypothesis. Hence, the model is homoskedastic.

In view of this, the researcher resorted to using Vector Error Correction Model (VECM) for more explanations since Vector Autoregressive (VAR) model is atheortical.

Vector Error Correction Estimates

Included observations: 33 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Error Correction:	D(GDP)	D(ADMIN)	D(COMSERV)	D(ECOSERV)	D(TRANS)
CointEq1	-0.401839	-0.006312	0.006313	-0.031583	0.003189
	(0.06759)	(0.00174)	(0.00050)	(0.00223)	(0.00392)
	[-5.94557]	[-3.63516]	[12.7380]	[-14.1777]	[0.81455]
R-squared	0.959572	0.946166	0.996939	0.990517	0.978363
Adj. R-squared	0.919145	0.892332	0.993878	0.981034	0.956726
F-statistic	23.73560	17.57561	325.6979	104.4521	45.21681

The analysis in table above shows that error correction equation (CointEq1) satisfied the condition, hence, significant. The speed of adjustment is 40.18%. That means short term errors can be corrected in the long run with annual speed of adjustment of 40.8%. Also long run casuality flows from independent to dependent

Cholesky Impulse Response

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.
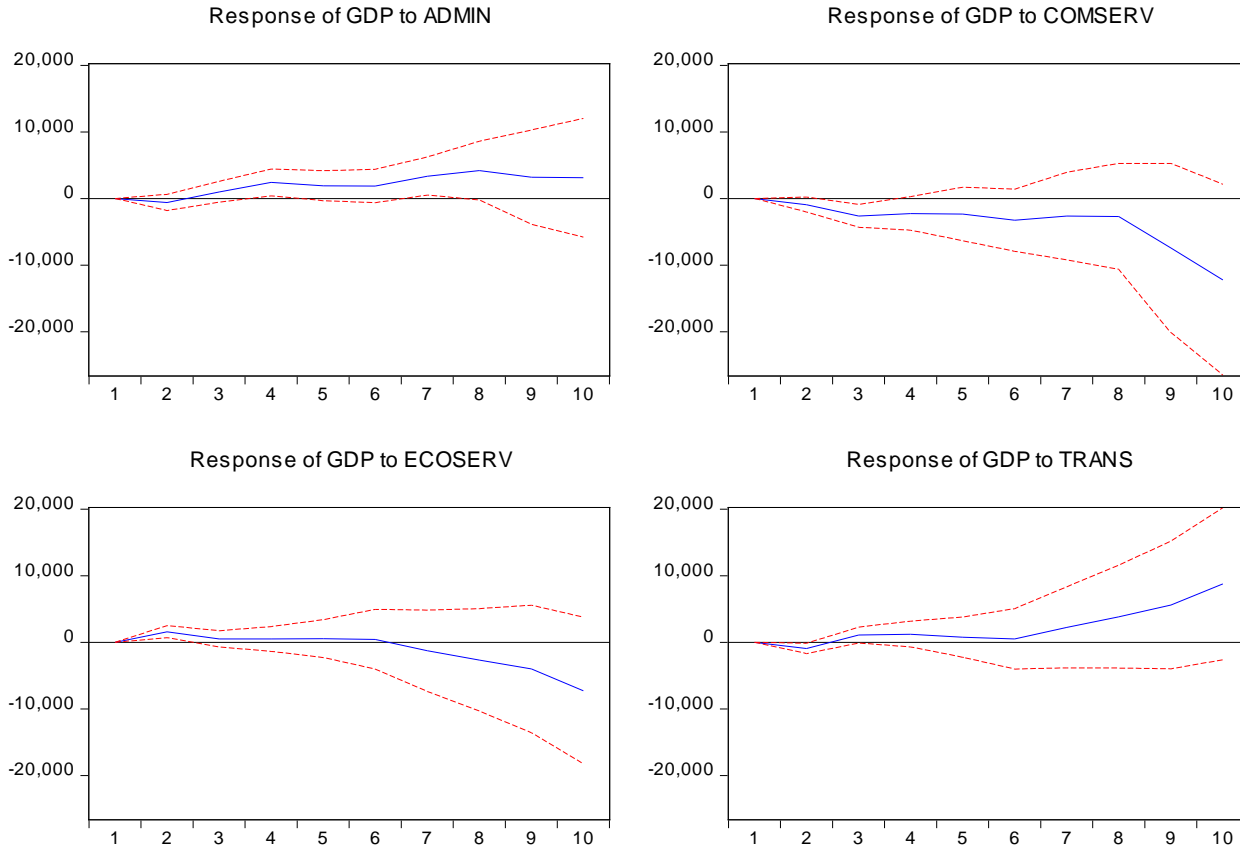
From above, Impulse responses of economic growth to all the variables of government recurrent expenditure were positive and scantly negative at various period authenticating the fact that the government recurrent expenditure are good predictors of economic growth in Nigeria.

Variance Decomposition

Period	S.E.	GDP	ADMIN	COMSERV	ECOSERV	TRANS
1	2351.852	100.0000	0.000000	0.000000	0.000000	0.000000
2	3550.937	63.53922	2.728608	6.715604	20.06486	6.951699
3	5677.478	56.98210	4.167350	23.79813	8.622315	6.430103
4	7463.869	52.34290	12.92842	22.86781	5.429821	6.431050
5	9121.785	56.15688	13.01874	21.80666	4.010593	5.007128
6	10859.93	56.61936	12.16675	24.45042	3.001989	3.761474
7	12495.04	51.18969	16.46536	22.95387	3.310520	6.080557
8	14616.69	42.48791	20.26237	20.16366	5.706304	11.37976
9	19343.82	37.01271	14.32740	26.24093	7.522693	14.89627
10	27633.74	31.26812	8.294840	32.41897	10.61801	17.40006

Cholesky Ordering: GDP ADMIN COMSERV ECOSERV TRANS

From the above, GDP explains 100 percent of its variations in the first period and diminishes 31.2 percent in the tenth period. In other words, "the own shock" started from 100 percent and decreased to 31.2 percent. Expenditure on administration started from zero percent of the variation in GDP in the first period and fluctuates between 2.7 to 20.2 percent over the period. Expenditure on social and community services started from 6.7 percent in the second period and increased to 32.4 percent in the tenth period, and then the expenditure on economic services fluctuates from 0.00 to 20.06 within the period, while expenditure on transfers fluctuates from 0.00 to 17.4 within the period.

VAR Granger Causality/Block Exogeneity Wald Tests

Dependent variable: GDP

Excluded	Chi-sq	Df	Prob.
ADMIN	1.034680	2	0.5961
COMSERV	15.25806	2	0.0005
ECOSERV	1.021626	2	0.6000
TRANS	21.42951	2	0.0000
All	154.4104	8	0.0000

Dependent variable: ADMIN

Excluded	Chi-sq	Df	Prob.
GDP	53.05490	2	0.0000

Dependent variable: COMSERV

Excluded	Chi-sq	Df	Prob.
GDP	20.02034	2	0.0000

Dependent variable: ECOSERV

Excluded	Chi-sq	Df	Prob.
GDP	15.38275	2	0.0005

Dependent variable: TRANS

Excluded	Chi-sq	Df	Prob.
GDP	0.303689	2	0.8591

The table above, it is seen that economic growth (GDP) does not granger cause government expenditure on Administration, but government expenditure on Administration granger causes GDP (unidirectional effect). While GDP does granger cause government expenditure on social and community services, in the same way government expenditure on social and community services granger causes GDP (bidirectional or feedback effect). But GDP does not granger cause government expenditure on economic services, conversely government expenditure on economic services granger causes GDP, hence unidirectional effect. While GDP granger causes government expenditure on transfers, but government expenditure on transfers does not granger cause GDP, hence unidirectional. That means all components of government expenditure structure and GDP granger cause each other with unidirectional effect, except social and community services that has a bidirectional effect or feedback effect. In other words government expenditure on social and community services granger and economic growth drives each other.

4.1 Discussion of findings

The results of this study show that government recurrent expenditure namely expenditures on Social and community services, Economic services and Transfers exert positive significant impact on the growth of Nigerian economy. However this excludes expenditure on Administrationwhich was found to exert negative and significant impact on the growth of on Nigeria economy.

The findings that recurrent expenditure on social and community services, economic services and transfers exert positive and significant impact on the growth of the economy corroborate Wagner's Law Of Increasing State Activities which stipulates that the activities of government are increasing function of the changing structure of the economy. These findings also corroborate the findings of Miftahu and Rosni (2017); Taiwo and Abayomi (2012); Edame and Akpan (2013); Danladi, Akomolafe and Anyadiegwu (2015); Oziengbe (2013); Akanbi (2014); Ditimi, Nwosa, and Ajisafe (2011); Chude and Chude (2013) and Appah and Ateboh-Briggs (2013) and Sevitenyi (2012) which found that expenditures on social and community services, economic services and transfers exert positive and significant impact on the growth of Nigerian economy. However this excludes recurrent expenditure on administration which found to exert negative and significant impact on growth on Nigeria economy. This provides that these variants of government expenditure engender economic growth.

The finding however contradicts the findings of Okanta (2009);; Egunjobi (2013); Babalola, Aninka and Solako (2015); and Tajudeen and Ismail (2013) which see government expenditure as not contributing to the growth of the economy. The findings that recurrent expenditure on administration does exert negative and significant impact on the growth of the economy conforms to the assertion of the classical economist that expenditure on administration, defence, justice, law and order and maintenance of state are unproductive since they do not add to capital stock and/or tangible goods in the economy (Bhatia, 2002).

Again, with the exception of government expenditure on social and community services that has bidirectional effect on the growth of the economy; all components of government expenditure structure have unidirectional effect. In other words, government expenditure on social and community services and economic growth drive each other while economic services, administration and transfers drive economic growth with no feedback effect. The finding corroborates Appah and Ateboh-Briggs (2013) and Sevitenyi (2012), that there is a unidirectional causality running from aggregate public spending to economic growth. But Sevitenyi (2012), at the disaggregate level, results show that all the variables except recurrent expenditure cause economic growth, implying that government expenditure promotes growth in Nigeria.

Recommendations

Therefore, we suggest that adequate funding of economic services and social and community services due to their positive contributions to the expansion of the growth of Nigerian economy. Also, government recurrent expenditure on transfers should receive priority attention as this will contribute immensely to economic growth.

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