Government Recurrent Expenditure Effect on Economic Growth: Evidence from Expenditure on some Selected Variables

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Abstract: The study investigated into the effect of some selected government recurrent expenditure on economic growth, with emphasis on social and community services, economic services and transfers. In a modern economy, government perform two functions; economic and non-economic. Studies have shown that developed countries focus more on transfers and subsidies, while developing economies pay more attention on social and community services. For the Nigerian state, government performed these functions religiously, and available statistics showed that government spend more on recurrent goods and services, specifically on transfers, than capital goods and services and this has implication on growth. The study adopted Vector Error Correction Model technique. Other preliminary tests were conducted. From the empirical result, it was evident that economic services and social and community services are not growth drivers of the Nigerian state. The implication of this finding is that government efforts on improving the lives of its citizens has not translated into growth. It was recommended that government should make effort to also allot funds to capital expenditure in such a way that there would be no much significant difference between capital and recurrent spending as this would improve the lives of the citizens on the one hand, and influence the growth rate of the economy on the other.

Keywords: Economic functions of government; Recurrent expenditure; Social and community services; Transfers; Economic growth

JEL Classification: H51; H52; H53

1. Introduction

In every mixed economic system, government performs two main functions; economic (allocation, redistribution, regulation and stabilization) and non-economic functions (defense, security, law and order, etc). Since the end of world war II, the size of government increased (Iyoha, 2007; Wu and Lin, 2010) in developed and developing economies with respect to its economic obligations/functions. Reconstructing the devasted economies of the world became the top priority of most governments. Iyoha (2007) stated that the growth of government expenditure in advanced countries tilted towards transfer payment and subsidies while that of the less advanced countries were more on social and community services. These services

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are funded under government recurrent expenditure (GRE). Economic obligations of government are sometimes driven by income inequality (Meltzer and Richard, 1981; Maluleke, 2017) and other factors peculiar to the economy, of which an example given by Shelton (2007), surmised that given an economy with elderly population, increase in the demand for social security can be the driving factor for expansion of government redistributive function. Also, Wu and Lin (2010) surmised that demand for public services is an important variable that can expand government size. This can be applied to the Nigerian state. In other words, the size of government expenditure (recurrent and capital) can be determined by the fiscal policy objectives of government which most times coincides with the country's growth objectives.

The economy of Nigeria is driven mostly by governments efforts in economic activities since independence. Government had religiously carried out its economic responsibilities in areas of social and community services (SCS), economic services (ES) and transfers (CBN, 2017). Efforts had been made to deeply involve the private sector in socio-economic activities and in recent times these efforts seen to be productive. Despite that, government is still the largest employer of labour, and also, provides SCS for its citizens, as noted by Iyoha (2007) and indulges in expenses on transfers, making its recurrent expenditure to rise. GRE accounts for a larger percentage of the total government expenditure (See table 1).

Table 1. Share of recurrent to total expenditure and GDP

Year	% of recurrent expenditure to total expenditure	% of recurrent expenditure to GDP
1980	32.4	0.02
1985	58.1	0.04
1990	60.1	0.18
1995	51.3	0.63
2000	65.8	1.95
2005	67.2	3.13
2010	74.1	5.61
2015	76.8	5.49
2016	90.1	8.39
2017	85.0	10.31

Source: Authors computation from CBN and World Bank online data.

Table 1 shows that there has been a steady increase in the share of GRE to total government expenditure (TGE) and GDP since 1980. GRE share of TGE rose from 32.4% to 60.1% in 1990, with 1995 recording 51.3%, and skyrocketed to 90.1% in 2016. GRE share of GDP rose steadily from 0.02% in 1980 to 10.31% in 2016. Consequently, government expenditure is geared more towards recurrent spending thereby making the size of GRE outweighs that of capital expenditure and this has implication for growth. This study therefore aimed at empirically ascertaining the

implication of the persistent rise in GRE on economic growth of the country laying emphasis on economic services and social and community services.

2. Literature Review

A brief review of literature shows that studies have been done of GRE, GCE (government capital expenditure), TGE and economic growth in Nigeria and other developing countries. Some of the studies affirmed that GRE influence positively on growth while some gave a counter result. Modele, Okafor, Onwumere and Ibe (2012) maintained that GRE positively influence economic growth of Nigeria. This finding attested to that of Egbetunde and Fasanya (2013) who adopted ARDL (bound test) technique in estimating the nexus between public expenditure and economic growth in Nigeria. It was evidenced from their findings that GRE positively influence growth.

Iheanacho (2016) disaggregated TGE into recurrent and capital. It was revealed from their findings that GRE exhibits a short-run relationship with growth. Consequently, GRE is a major driver of growth in Nigeria. Lim (1983) did a similar study and investigated on economic growth in LDCs. It was observed that GRE in LDCs increases steadily and influences growth.

Bose, Hague and Osborn (2003) studied government spending on education and it was observed that education spending is a key component or driver of growth in developing countries. Haque and Osborn (2007) revisited the study by examining growth effects of TGE on growth in 30 developing countries. A disaggregation of GRE was done and the study affirmed that expenditure on education is associated with economic growth of these countries.

From another perspective, Ansari, Gordon and Akuamoah (2010) found in their study on three (3) African countries (South Africa, Ghana and Kenya) that public spending does not influence national income (GDP). Babatunde (2010) supported the idea from the result of their analysis which shows a weak empirical support that government spending increases GDP.

3. A Review of Recurrent Expenditure in Nigeria

Recurrent expenditure in Nigeria can be disaggregated into four; administration, SCS, ES and transfers, classified under economic functions/obligations of government, while Administration (Defense, internal security and general administration) is classified as non-economic function/obligation of government. The components of expenditure on SCS, ES and Transfers are displayed in table 2 below.

Table 2. Components of Government Recurrent Spending on SCS, ES and Transfers

SCS	ES	Transfer
Education	Agriculture	Debt servicing (Domestic and Foreign)
Health	Roads and Construction	Pension and Gratuities
Other Social and Community Services	Transport/ Communication	Contingencies and Subventions
	Other Economic Services	Other Charges (FCT)

Source: CBN online statistical bulletin and annual report (2017)

SCS is composed of recurrent expenditure on education, health, and other services. ES, composed of expenditure on agriculture, roads and construction, transport and communication, among others, while transfer includes domestic and foreign debt servicing, pension and gratuities, subventions and contingencies, FCT, among others. Records from CBN Annual Report, 2010-2017, under the functional classification of GRE, showed that transfers accounted for the largest percentage of total GRE, while ES accounted for the least, as shown in table 3.

Table 3. Percentage share of SCS, ES and Transfer to total GRE

Year	SCS (%)	ES (%)	Transfer (%)
2010	17.7	13.3	28.2
2011	18.7	9.4	28.8
2012	19.2	6.9	34.5
2013	22.9	7.9	39.1
2014	22.6	7.8	40.6
2015	21.1	7.2	39.6
2016	18.6	6.1	44.5
2017	17.4	6.0	52.5

Source: CBN Annual Report 2010-2017.

Observation of table 3 affirmed that there had been a steady increase in spending on transfer, rising from 28.2% in 2010 to 52.5% in 2017. SCS rose from 17.7% in 2010 to 22.9% in 2013 and fell to 17.4% in 2017. ES recorded a gradual fall from 13.3% in 2010 to 6.0% 2017. Consequent upon the above, government pays more attention to debt servicing, pensions and gratuities, among others and this has implication for growth. It is noteworthy that the high percentage in transfer is as a result of domestic debt servicing (see table 4).

Table 4. GRE on Transfers 2010-2017 (Naira Billion).

	2010	2011	2012	2013	2014	2015	2016	2017
Domestic	375.8	485.42	632.9	772.39	880.4	996.6	1,522.8	1,903.4
Foreign	39.86	41.77	48.4	55.71	61.3	63.59	61.24	55.8
Pen. & Grat.	183.48	131.52	147.1	139.73	182.81	208.11	168	250
FCT& Others	147.5	260.07	245.6	474.1	268.42	221.53	198.27	461
Cont. & Subv.	131.7	37.4	73.6	-	-	29.99	97.04	-

Source: CBN Online Statistical Bulletin (2017)

A critical appraisal of table 4 affirmed that government spent more on domestic debt servicing than other components of transfer. Also, reasonable amount was spent on FCT and others, and pension and gratuities. Foreign debt servicing accounted for the least. It is important to note that these spending are likely to influence growth positively since it will boost the local/domestic economy through consumption expenditure of individuals who benefit from these expenditures in the form of pension and gratuities, interest payment on domestic debt, among others.

4. Theoretical Framework and Research Method

The study anchored on Keynesian hypothesis on public expenditure impact on growth. Keynes (1936) after the great depression hypothesized that government spending is driven by the growth objective of a country, and a policy variable (Cheong, 2001; Antonis, Constantinos and Persefoni, 2013) that can spur the economy into growth and development. Thus, government spending is an exogenous variable rather than endogenous variable as postulated by Wagner (1876) (Thabane and Lebina, 2016; Ampah and Kotosz, 2016)

Secondary data were used, and sourced from Central Bank of Nigeria Annual Report for various years and online statistical data. Time series data used for analysis were gotten from CBN and World Bank. Like most studies, the data were subjected to stationarity test using ADF. The cointegration test (CT) adopted was Johansen. VEC (Vector Error Correction) estimate was applied to ascertain the long-run dynamics of the model and the causal effect determined by VEC system equation. The short-run causal effect was ascertained using Wald Coefficient Test. For the robustness and acceptability of the method of analysis and results from the analysis, the model was subjected to preliminary tests. These tests include; *VEC system Residual Portmanteau Test for Autocorrelation*. These analyses were done using E-views 7 software.

The model for the study is specified thus,

$lnRGDP = a_0 + a_1 lnSCS + a_2 lnECOS + U_i$ ----------(1)

where;

lnRGDP = log value of Real Gross Domestic Product

LnSCS = log value of Social and Community Services

lnECOS= log value of Economic Service

5. Results

Results from the analyses (stationarity, co-integration, VECM, and other preliminary tests) are presented below.

5.1. Unit Root Test

Table 5. ADF Test of Stationarity

Variables	Levels	Prob. Value	First Diff	Prob. Value	5% critical Level	Decision
RGDP	0.674866	0.9903	-9.078440	0.0000	2.92	I(1)
LnSCS	-2.176977	0.2171	-7.585843	0.0000	2.92	I(1)
lnECOS	-1.002723	0.7447	-8.556159	0.0000	2.92	I(1)

Source: Author's regression analysis, 2019

The ADF test result unveiled the stationarity status of the variables used. All the variables are stationary at first difference, considering their probability values and 5% critical level which is less than the first difference values but greater than the level values. Since the variables are all stationary at this same order (order one), the Johansen cointegration test will be most appropriate for the determination of the long-run relationship among the variables.

5.2. Cointegration Test

Table 6. Johansen Cointegration Test

Hypothesized No of CE(s)	Eigenvalue	Trace statistic	0.05 critical value	Prob Value	Max-Eigen statistic	0.05 critical value	Prob Value
None	0.474064	40.35289	29.79707	0.0021	29.55852	21.13162	0.0026
At most 1	0.190249	10.79437	15.49471	0.2245	9.707310	14.26460	0.2319
At most 2	0.023355	1.087061	3.841466	0.2971	1.087061	3.841466	0.2971

Trace and Max-Eigen statistics denotes 1 cointegrating equation.

Source: Author's regression analysis, 2019

The result in table 6 disclosed the Johansen cointegration test of long-run relationship of the variables. It shows one (1) cointegrating equation. Thus, a long run relationship exists among the variables. Having established that a long run relationship exists, the study determined the long run causality by further estimating the VECM using the OLS on the VEC system equation as shown in tables 7.

Table 7. Vector Error Correction System Equation (Long run causality)

Variables	Coefficient	t-statistics	Prob. Value
ECM(-1)	-0.015535	-2.233078	0.0275
D(LRGDP(-1))	0.168466	1.071425	0.2863
D(LRGDP(-2))	-0.048751	-0.309543	0.7575
D(LSCS(-1))	0.009303	0.432768	0.6660
D(LSCS(-2))	0.024532	1.341348	0.1825
D(LECOS(-1))	-0.015391	-0.537102	0.5923
D(LECOS(-2))	-0.012419	-0.551092	0.5827

$R^2 = 0.213593$

$R^{-2} = 0.064813$

DW= 2.00

Source: Author's regression analysis, 2019

The VEC system result shows that the coefficient of ECM (-0.015535) is negative and statistically significant (prob. value of 0.02%), effortlessly passing 5% significant level. This implies that in the event of displacement from equilibrium, there will be convergence to equilibrium and the speed of adjustment is 0.1%. The prob. values of all the explanatory variables revealed a non-long run causality with the dependent variables. R^2 is 21%, signifying that 21% of the dependent variable is explained by the independent variables. Noteworthy, VECM takes all variables as endogenous and exogenous at the same time but the above explanation was done based on LRGDP as the endogenous variable.

Table 8. VEC Granger Causality (Block Exogeneity Wald Test)

Dependent Variable: D(LRGDP)

Variables	Chi.Sq	Df	Prob.
D(LECOS)	0.399153	2	0.8191
D(LSCS)	1.822208	2	0.4021
All	2.175517	4	0.7035

Dependent Variable: D(LSCS)

Variables	Chi.Sq	Df	Prob.
D(LRGDP)	5.880300	2	0.0529
D(LECOS)	2.019436	2	0.3643
All	6.402388	4	0.1710

Dependent Variable: D(LECOS)

Variables	Chi.Sq	Df	Prob.
D(LRGDP)	0.065116	2	0.9680
D(LSCS)	0.586787	2	0.7457
All	0.837203	4	0.9334

Source: Author's regression analysis, 2018

It can be deduced from the short run VEC causality result in table 8 that there is no short-run causality between the dependent and explanatory variables. On the other hand, RGDP cause SCS but when combined with ECOS, they do not cause SCS.

6. Preliminary Analysis

The results of the VEC residual tests (portmanteau autocorrelation, LM serial correlation and heteroscedasticity) are shown in the tables below.

Table 9. VEC Portmanteau Autocorrelation Test

Lags	Q-Stat	Prob.	Adj. Q-Stat	Prob.	Df
1	0.373910	1.0000	0.382459	1.0000	9
2	2.423701	1.0000	2.527537	1.0000	18
3	9.562577	0.9992	10.17633	0.9986	27
4	14.57156	0.9994	15.67400	0.9987	36
5	27.97063	0.9782	30.74795	0.9481	45
6	33.77154	0.9859	37.44131	0.9580	54
7	45.51890	0.9525	51.35266	0.8529	63
8	52.32315	0.9609	59.62809	0.8509	72
9	55.65565	0.9859	63.79372	0.9205	81
10	61.06145	0.9916	70.74404	0.9335	90
11	65.06617	0.9966	76.04440	0.9581	99
12	77.43087	0.9884	92.90535	0.8495	108

Source: Author's regression analysis, 2018

The VEC autocorrelation test revealed that there is no autocorrelation in the model. This conclusion was reached from the prob-values of Q-Stat and Adj. Q-Stat which appeared to be non-significant as they are greater than 0.05 significant level. The null hypothesis of the Portmanteau test states that there is no residual autocorrelation. Therefore, the study accepts the null hypothesis of no autocorrelation.

Discussion of findings

The findings from the empirical analysis critically unveiled the effect of some selected government recurrent expenditure on economic growth in Nigeria. The VECM long-run causality test revealed that the components of the selected recurrent expenditure variables (economic service, and social and community service) do not

cause economic growth in Nigeria. Even the speed of adjustment to equilibrium (0.1%) is no impressive. This finding deviates from other studies reviewed in this study. It is clear that recurrent expenditure on agriculture, roads and construction, transport and communication (Economic Service), education, health (Social and Community Service) has not significantly influence growth in Nigeria over the years under review. Given that there has been a persistent increase in government recurrent expenditure over the years, its influence on economic growth is not reflecting in economic and social and community services components of recurrent expenditure and this calls for concern.

7. Conclusion

This study had ascertained that the recurrent expenditure of government does not significantly influence or cause economic growth and development of the country. As posited by Keynes (1936), governments spend to enhance the growth and development of their economies. This study has demonstrated that GRE though GRE is higher than GCE in Nigeria, it does not spur economic growth from the angle of economic services rendered, and social and community services. Review of literature showed that transfers is the largest in terms of expenditure size and a large percentage of transfer spending stems from domestic debt servicing. The implication is that government spends more on payment of interest on loans contracted domestically and this to a large extent affects other components' influence on growth. This explains their non causality relationship. The non-significance of social and community services can be attributed to the fact that the benefit derived from education and health may influence the economy in the long run (Bose, Hague and Osborn, 2003).

Based on the above, the study recommended that government should equitably distribute its income spending between recurrent spending and capital expenditure in such a way that there should be no much significant difference. Since recurrent spending does not enhance growth, efforts should also be geared towards increasing capital expenditure as this would improve on the growth rate of the economy. For further studies, the effect of transfers and capital expenditure should be tested.

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