The Viability of Public Expenditure in Stimulating Economic Growth in Nigeria (Mediating on the Role of Public Sector)

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Abstract: This paper explores the relationship between public spending and economic growth in Nigeria between 1981 and 2019. The study employs ARDL along with Granger causality test to determine the directional and dynamic relationship. The results show that social and community recurrent expenditure, social and community services capital expenditure and administration recurrent expenditure simulates Nigeria Economic growth (GDPGR), while, economic service recurrent expenditure (ESRX), economic service capital expenditure (ESCX), transfer capital expenditure and transfer recurrent expenditure deters Nigeria economic growth (GDPGR). The findings further reveal that there is unidirectional causality that runs from both administrative capital expenditure (ADCX) and administration recurrent expenditure (ADRX) to economic growth (GDPGR). The study recommends that government should increase her spending on both recurrent and capital expenditures on social and community as well as administrative recurrent expenditure to move towards achieving vision 2030, while it should reduce the budgetary allocation to capital and recurrent expenditure on transfer, administration capital expenditure, and also reduce borrowing to reduce debt services. Finally, the government should monitor the proper disbursement of the allocated fund, block all loopholes and ensure full implementation of the budget.

Keywords: Peacock and Wiseman; Public spending; economic growth; ARDL; Wagner's law

JEL Classification: A10, C22, H50

1. Introduction

Prior to the great depression of 1929, world economy was been governed by the principle of "laissez faire" of the capitalist. Capitalists are of the opinion that economic activities should be governed by the principle of forces of demand and supply with the help of the invisible hand which will controls it, and that government

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should focus on the provision of security as well as maintenance of laws and order. However, in 1929 the world economy collapsed and the principle could no longer efficiently and equitably allocate economic resources. The inability of laissez-faire to stimulate the world economy from the collapse made the world to accept and adopt the philosophy of John Maynard Keynes who advocated for injection of purchasing power through public spending for the economy to get out of the depression i.e the government should spend itself out of the depression. With the help of Keynes philosophy, the world spends itself out of depression. Since then the issue of public expenditure has become a contemporary issue of discuss.

Bhatia (2002), noted that it is through public spending that infrastructure which promotes economic growth are created, regional disparities are reduced, social overheads are developed, education and training of the citizens are catered for etc. Rostow (1960), also identified public expenditure as an essential tool that developing nations like Nigeria needs to develop. He stated that for a country to move from the stage of precondition for take-off to the next stage of development there is need for social overhead capital, and this can mainly be provided by government because no private investor would invest in such project because it has long gestation period, rarely profitable, and has externalities. Thus, government has crucial role to play by providing such social overhead capital. Therefore, there is need for an increment in public expenditure for the economy to grow.

Chude and Chude (2013) are of the view that increased government spending is an effective tool that can stimulate overall demand for a stagnant economy and promote the greenhouse effect. There has been a consistent step-up in the volume of public spending in all lands of the world Nigeria inclusive, this is because the functions and responsibilities of government have been increasing consistently (Adegboyo, 2020). Keynes (1936) also noted that an increase in public expenditure would boost economic growth through the injection of purchasing power into the economy. Jhnigan (2000) also buttressed the importance of public expenditure by stating that public expenditure on social welfare can be used to reduce income inequalities, correct externalities, and regional disparities

Having placed the importance of public spending to economic development, it is essential to analyze the trend of Nigeria's government spending and economic growth rate as indicated in table 1 below.

Table 1. Nigeria's Public Expenditure from 2010 to 2018

year	Total expenditure (in billions)	GDP growth rate
2010	4194.58	8.01
2011	4712.06	5.31
2012	4605.39	4.23
2013	5185.32	6.67
2014	4587.39	6.31
2015	4988.86	2.65
2016	5858.56	-1.62
2017	6456.70	0.81
2018	7813.74	1.94

Keynes (1936), postulated that increase in public spending would stimulate economic growth, however, in Nigeria the economic growth have not commensurate with the increased expenditure as revealed in table 1 above, so there is need to investigate the pattern of Nigeria's public expenditure to know the reason why Nigeria has not develop despite the huge public expenditure. Also, there have been mixed result on how pattern of public expenditure affects economic growth.

Researchers like Fajingbesi and Odusola (1999), Oziengbe (2013) showed that only capital spending contributed positively to economic growth while researchers like Oke (2013), Ogiogio (1995), Oyediran, Sanni, Adedoyin and Oyewole (2016), Idenyi, Obinna, Agbi, and Ogbonnaya (2016) found that only recurrent expenditure contributed positively to economic growth, therefore, this study would investigate into which pattern of expenditure contributes to the economic growth of Nigeria. Also, there is continuous argument about the impact of aggregate public expenditure on economic growth, as some researchers like Agbonkhese and Asekome (2014), Oyinlola (1993), found that government spending positively stimulates economic growth while researchers like Laudau (1983) argued that public expenditure inhibits economic growth, while others like Akpan (2005), Maku (2014), Usman, Mobolaji, Kilishi, Yaru and Yakubu (2011) noted that there is no relationship between the two variables. So there is a need to investigate further.

Researchers like Egbetunde and Fasanya (2013), Oke (2013), Ogiogio (1995), Oyediran, Sanni, Adedoyin and Oyewole (2016) and Oziengbe (2013) who conducted research on the impact of government expenditure on economic growth made use of aggregate expenditure, capital expenditures and recurrent expenditures while researchers like Robinson, Eravwoke and Ukavwe (2014), Akpan (2005), Castles and Dowrick (1990), Devarajan Swaroop and Zou (1996), Seymour (1997) and Nitoyet al (2003) used disaggregated expenditure: education, health, etc. To get the accurate result, this research work would combine both pattern and disaggregated expenditure approach in conducting this research.

In addition, there are differing views about the causal link between public spending and economic growth. Researchers like Komain et al. (2007), Odo, Nwachukwu, Agbi and Okoro (2016) argued that there is a unidirectional causality that ranges from government spending to economic growth, which was in tandem with the Keynes ideology. The second category of researchers argued that there is a unidirectional causality that runs from economic growth in public spending, which conform to the theory of Wagner (1983) while the third set of researchers like Loizides and Vamvouks (2005) argued that there is a bidirectional causality between government expenditure and economic growth. So this research work would invest to determine the causal relationship between government spending and economic growth in Nigeria.

2. Theoretical Framework

2.1. Wagner's Law

The law was propounded by a German Economist named Adolf Wagner in 1893. He conducted an empirical research into the rising expenditure of Germany and other European nations in the 19th century. According to his findings, he proposed legislation entitled "An Act to Increase Public Participatory Government Activity". Wagner stated that as economic develops due to increased industrialization and urbanization, the volume of public expenditure increases as a result of increased function of the government. Wagner indicated that government expenditure is occasioned by increased economic growth.

Wagner identified three factors that can cause an increase in government spending, namely:

(i) As population grows and the level of industrialization and urbanization increased, the government expenditure would increase because of the need for government to provide both administrative and protective services.

(ii) As the economy gets urbanized and industrialized, the need for government to provide social and welfare services increase.

(iii) As the country gets industrialized the level of science and technology would advance and this would lead to higher government spending on various project.

Wagner argued that "there are inherent tendencies for the activities of the different layers of the government (such as central and state government) to increase both extensively and intensively" (Bhatia, 2012).

2.2. Peacock and Wiseman's Theory of Government Spending.

In 1961, Peacock and Wiseman published their empirical findings on the UK's economy between 1890 and 1955. Their work was grounded on the political theory of public spending. Established on their findings, they came up with these arguments: government likes to spend money, citizens do not like to increase their tax level, and the citizens keep increasing their need for social services. Therefore, there is a margin between the proposed government spending and the tax paid to the government and this margin can be reduced by large-scale disturbances like war. During the war, government would increase the tax rate and also expand the tax structure to generate revenue to finance the increase in defense expenditure and other social services. Although people may initially kick against the new tax rate but would latter accept this new tax rate because it is during war. After the war, people would have stimulated used to the new tax rate thus the rate would remain and in this, a new permanent tax rate has been reached, so there would be an increase in the revenue of the regime to finance its spending.

3. Literature Review

Public expenditure is one of the fiscal policy instrument which the government uses in achieving the macroeconomic goals. Public spending is an outflow of resources from the government to other sectors of the economy, whether requited or unrequited (CBN, 2017). Government spending can be categorized into two, namely: capital expenditure and recurrent expenditure. Capital expenditures are expenses incurred on physical infrastructure and other expenditures that contributes to economic growth, while recurrent expenditure are expenses government incurred for the day-to-day running of government business.

In a panel data set of three developed countries namely; Greece, Ireland, and the UK Loizides and Vamvoukas (2005), found that public spending positively influence economic growth of the three countries. Similarly, in a panel data of 30 OECD countries between the period of 1970-2005, Olugbenga and Owoeye (2007), found that there is a relationship between public spending and economic growth. The study also revealed that there is a unidirectional causality that runs from economic growth to public spending in 10 of the countries, unidirectional causality that runs from public spending to growth for 16 of the countries and bidirectional causality relationship between public spending and economic growth in the reaming four countries. Furthermore, Devarajan, Swaroop and Hengful (1993), in their study of 14 developed countries between 1970 and 1990 found that expenditure on transportation, communication and health promotes economic growth while expenditure on education and defense adversely affects economic growth of the countries they studied. Bingxin et al. (2009), in their assessment of 44 developing

countries from 1980 – 2004 using dynamic GMM technique found that expenditure on human capital propel economic growth in African countries, whereas it is expenditure on capital formation, agriculture, and education that propel economic growth in Asia countries, public spending has no impact on economic growth of Latin America.

Kweka and Morrissey (1996), in their study of Tanzania economy found that recurrent expenditure promotes economic growth while government spending on public investment hinders economic growth. Similarly, Komain et al. (2007), result revealed that government spending had a positive impact on Thailand's economic growth, also, there is unidirectional relationship between public spending and economic growth. Oke (2013), in his study of Nigeria used OLS technique and found that total expenditure and recurrent expenditure positively impact economic growth while capital expenditure distort economic growth in Nigeria. In the same vain, the result of Oziengbe (2013), investigation revealed that recurrent expenditure stimulate economic growth while capital expenditure hinders economic growth. Furthermore, Idenyi, Obinna, Agbi and Ogbonnaya (2016), in their study using Johansen cointegration estimation technique found that recurrent expenditure had positive impact on economic growth while capital expenditure adversely affect economic growth. They also found that there is unidirectional causality that runs from government capital expenditure to economic growth and bidirectional causality between government recurrent expenditure and economic growth.

Nurudeen and Usman (2010), in their study between 1970 and 2008 found that aggregate capital and recurrent expenditure negatively influence economic growth while disaggregate expenditure on health, communication and transportation promotes economic growth in Nigeria. Contrariwise, Oyediran, Sanni, Adedoyin and Oyewole (2016), found that recurrent expenditure promotes economic growth while capital expenditure deters economic growth in Nigeria. Lastly, Nworji, Okwu, Obiwuru and Nworji (2012), revealed that capital and recurrent expenditures on social and community services and recurrent expenditure on transfers positively impact economic growth in Nigeria while capital expenditure on transfers had no impact on economic growth in Nigeria.

4. Methods

Model Specification

Sequel to the theoretical framework and the empirical findings reviewed the model specification thereby followed the model of Nworji, Okwu, Obiwuru and Nworji (2012) with modifications.

GDPGR =f (ADCX, ADRX, ESCX, ESRX, SCSCX, SCRX, TRX, TCX)t

GDPGR= = β_0+ β_1ADCX + β_2ADRX + β_3ESCX + β_4ESRX + B_5SCSCX + B_6SCRX + B_7TRX + B_8TCX +μ_t (1)

Where the following notation has been used:

GDPGR= gross domestic growth rate

ADCX = administration capital expenditure

ADRX = administration recurrent expenditure

ESCX = economic services capital expenditure

ESRX = economic services recurrent expenditure

SCSCX = social and community services capital expenditure

SCSRX = social and community services recurrent expenditure

TRX= Transfers recurrent expenditure

TCX= Transfers capital expenditure

μ_t = error term.

The econometrics form of equation 1 is displaced below in equation 2:

(GDPGR)$_t$ =β_0+ β_1(ADCX)$_t$+ β_2(ADRX)$_t$ + β_3(ESCR)$_t$ + β_4(ESRX)$_t$ + B_5(SCSCX)$_t$ + B_6(SCSRX)$_t$ + B_7(TRX)$_t$ + B_8(TCX)$_t$ + μ_t (2)

For an appropriate coefficient for the GDPGR with respect to the explanatory variables to be produce, I would transform the model equation (2) on log-linear econometrics form as seen below. Variable with negative value cannot be log so GDPGR was not logged which made the model to be log-linear.

GDPGR$_t$ =β_0+ Inβ_1(ADCX)$_t$+ Inβ_2(ADRX)$_t$ + Inβ_3(ESCR)$_t$ + β_4(ESRX)$_t$ +InB_5(SCSCX)$_t$ + InB_6(SCSRX)$_t$ + InB_7(TRX)$_t$ + InB_8(TCX)$_t$ + μ_t (3)

Where In represents natural log.

Operational Definition

Based on the CBN statistical bulletin the variables are explained below:

- Administrating expenditures are government expenses on external defense, internal security, general administration and National assembly;
- Social and community service expenditures are government expenses on education, health and other social and community services;

- Economic services expenditures are government expenses on agriculture, construction, transportation and communication, and other economic services;
- Transfer expenditures are government expenses on public debt servicing, pension and gratuities, contingencies/subventions and other CFR charges.

Data and Source

The study employs annual data covering the period 1981-2019. Data were collated from World Bank Data Base and Central Bank of Nigeria (CBN) statistical Bulletins.

5. Result and Discussion

5.1. Unit Root Test

The unit root test is a test used to determine the stationarity of variable(s). It is essential to know the stationarity of variable before it is been used because the stationarity or non-stationarity of a time series variable usually influence the behavior and properties of the variable strongly. In the literature, most time series variables are non–stationary and using non-stationary variable in model estimation might lend to spurious or nonsense regression results (Granger and Newbold, 1994).

UNIT ROOT TEST TABLE

Table 2. Unit Root Test

	AT LEVELS			IST DIFFERENCE			LEVEL OF INTEGRATION
VARIABLE	ADF-Test	1% C.V	5% C.V	ADF-Test	1% C.V	5% C.V	
LOG(ADCX)	-1.548	-3.633	-2.948	-10.247	-3.633	-2.948	I(1)
LOG(ADRX)	-1.594	-3.633	-2.948	-7.855	-3.633	-2.948	I(1)
LOG(ESCX)	-0.791	-3.627	-2.946	-6.315	-3.633	-2.948	I(1)
LOG(ESRX)	-1.202	-3.627	-2.946	-9.817	-3.633	-2.948	I(1)
GDPGR	-4.045	-3.627	-2.946	-9.059	-3.633	-2.948	I(0)
LOG(SCSCX)	-0.72	-3.633	-2.948	-9.387	-3.633	-2.948	I(1)
LOG(SCSRX)	-1.984	-3.654	-2.957	-7.833	-3.633	-2.948	I(1)
LOG(TRX)	-0.395	-3.627	-2.946	-7.886	-3.633	-2.948	I(1)
LOG(TCX)	-3.124	-3.627	-2.946	-6.629	-3.633	-2.948	I(1)

Table above examined the statistical properties of all the variables. The ADF tests for unit root were conducted for the variables in the model and the results of the test

at levels and first difference are presented above. The null hypothesis states that there is a unit root in each of the series that is each variable is non stationary and the rule of thumb is that the null hypothesis should be accepted if the absolute value of ADF statistic is greater than the critical value at any chosen level of significance. The ADF result in Table 2 indicates that variables like ADCX, ADRX, ESCX, ESRX, SCSCR, TRX and TCR are integrated of order one, I(1), while variable GDPGR is stationary at level. Based on the ADF test the condition for Johansen cointegration test is not met. This kind of conflict between the outcomes of the two tests is common in practice (Rahman, 2012). Consequently, this research would employ the ARDL – Bound testing method of co-integration analysis rather than the Johansen method.

5.2. Co-integration Test

Co-integration test is used to analyze non-stationary time series variable to estimate the long-run equilibrium in the system. Since the unit root test are of level integrate and first integrate the appropriate cointegration is ARDL Bound test because the test allows combination of fractionally integrated variables i.e. combines variables of different orders of integration. The Bounds cointegration test result is provided thus:

Table 3. ARDL Bounds Test

Test Statistic	Value	k
F-statistic	4.83	8
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	1.85	2.85
5%	2.11	3.15
2.50%	2.33	3.42
1%	2.62	3.77

Using the ARDL bounds test, the result above shows that with the assumption of weak exogeneity on ADCX, ADRX, ESCX, ESRX, GDPGR, SCSCR, TRX and TCR, the hypothesis of no long run relationship can be rejected at 5% significant levels as the F-statistic for the model is greater than 5% of both I (0) and I (1) bounds of 2.11 and 3.15 respectively. Thus, this shows existence of long-run relationship between ADCX, ADRX, ESCX, ESRX, GDPGR, SCSCR, TRX and TCR.

5.3. ARDL Analysis

This subsection presents the result obtained from estimating the ARDL unrestricted error correction (short run or dynamic) model and the ARDL long-run (static) model in equation. Following this result, this study examines and estimates both short-run

dynamics and the long-run relationships ADCX, ADRX, ESCX, ESRX, GDPGR, SCSCR, TRX and TCR.

Table 4. Long Run Multiplier Coefficient of ARDL

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(ESRX)	-4.301	2.376	-1.809	0.0871
LOG(ESCX)	-6.365	1.613	-3.946	0.009
LOG(ADRX)	10.337	3.935	2.627	0.017
LOG(ADCX)	-0.945	2.251	-0.419	0.6796
LOG(SCSCX)	5.296	2.653	1.996	0.0613
LOG(SCSRX)	10.283	3.571	2.879	0.010
LOG(TCX)	-0.525	0.303	-1.737	0.0995
LOG(TRX)	-16.308	3.965	-4.112	0.007
C	31.185	9.841	3.169	0.005

Long-Run ARDL Model Analysis

The co integration equation is:

GDPGR = 31.185 - 4301LOG(ESRX) – 6.365LOG(ESCX) + 10.337LOG(ADRX) - 0.945LOG(ADCX) + 5.296LOG(SCSRX) + 10.283LOG(SCSRX) - 0.525LOG(TCX) – 16.308LOG(TRX).

The result revealed that ADRX, SCSCX and SCSRX have positive relationship with GDPGR, while ESRX, ESCX, ADCX, TCX and TRX had negative relationship with GDPGR. Also, the result showed that ESCX, ADRX, SCSRX and TRX have significant effect on GDPGR at 5% significant level while ESRX, SCSCX and TCX have significant effect on GDPGR at 10% significant level and ADCX is not significant.

The results showed that economic services recurrent expenditure and economic service capital expenditure both had a negative significant effect on the economic growth rate. This implies that as government increases it's recurrent and capital expenditure on services like agriculture, construction, transportation and communication the economic growth rate reduces. This does not conform to the a priori expectation.

In the same vein, both capital and recurrent expenditure on transfers had negative effect on the economic growth. This implies that as government increases both its recurrent expenditure and capital expenditure on debt services, pension and gratuities payment the economy growth would decline. This does not conform to the a priori expectation. However, transfer recurrent expenditure has a more negative effect than the capital expenditure.

However, administrative recurrent expenditure was found to have positive significant effect on economic growth rate. The result implies that as government increases its spending on administrative recurrent services the economy grows. This conforms to the a priori expectation.

Furthermore, social and community services (recurrent and capital expenditure) both have positive impact on the economic growth. This implies that as government increases it capital and recurrent expenditure on education and health sector the economy growth rate increases. This conforms to the a priori expectation.

Government spending on administrative expenditure does not have any effect on economy. This does not conform to the a priori expectation.

Engle-Granger Theorem establishes that when co-integration exist the encompassing power of the error correction mechanism over other forms of dynamic specifications. Therefore, the short run analysis is presented below using ECM.

5.4. ARDLECM

Sequel to the existence of co integration relationships among the variables as evident in the ARDL Bound test, Auto-Regressive Distributed Lag Error Correction Model estimation technique would be used to determine the short-run behavior of the variables. The Error Correction Model captures the short run dynamics of the system and its coefficient measures the speed of adjustment to obtain equilibrium in the event of shock to the system. The below table shows the result of the short run dynamics of equation.

Table 5. Ardlecm Table

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
DLOG(GDPGR(-1))	-0.407	0.091	-4.463	0.0003
DLOG(ESCX)	-2.278	0.794	-2.869	0.01
DLOG(SCSRX)	2.01	0.856	2.36	0.0046
DLOG(TRX)	-3.296	1.394	3.722	0.0295
CointEq(-1)*	-0.879	0.102	-8.6	0.000
R-squared	0.805	Mean dependent var		0.217
Adjusted R-squared	0.754	S.D. dependent var		4.872
S.E. of regression	2.417	Akaike info criterion		4.801
Sum squared resid	157.751	Schwarz criterion		5.156
Log likelihood	-76.012	Hannan-Quinn criter.		4.923
Durbin-Watson stat	1.849			

Short-Run (Dynamic) ARDL Model Analysis

The Table 5 above shows the short run (dynamics) results. The optimal lag combination for the models is obtained via Schwartz Information criterion (SIC). The result in table 5 is the Error Correction Mechanism.

The result above revealed that government expenditure on economic services capital expenditure had negative impact on economic growth. This implies that government expenditure on economic services capital projects inhibits economic growth, whereas, it supposed to enhance growth. The reason for this could be that the fund allocated for the projects were not judiciary utilized or the project not fully and properly implemented.

Social and community service recurrent expenditures was found to have positive impact on the economic growth. This implies that as Social and community service recurrent expenditures increases, the economic grows further. The reason for this could be that as government pays salaries for workers in the affected sector, the employee spend it within the economy thereby encouraging investor to invest in the economy, which would in turn promotes economic growth.

Transfer recurrent expenditures had a negative impact on the economic growth i.e. as more fund is expended on transfer recurrent expenditures the economy deteriorate further. The reason for this could be that the money that supposed to be spend on the projects that would enhance economic growth were been spend on debt servicing.

From the result the ECM term is well defined, that is negative and statistically significant at 5% level. The coefficient is -0.879 which indicates that 87.9 percent of the previous year's disequilibrium in economic growth is been corrected by ADCX, ADRX, ESCX, ESRX, SCSRX, SCSCR, TRX and TCR. This also showed the speed at which the model converges to equilibrium. The magnitude of this coefficient implies that nearly 87.9 percent of any disequilibrium in economic growth rate is corrected by the some of the selected variable within one period (one year). The implication is that the present value of economic growth will adjust to changes in ADCX, ADRX, ESCX, ESRX, SCSRX, SCSCR, TRX and TCR.

5.5. Test for Causal Relationship

Granger causality test is use to investigate causal relationship between two variables in a time series. The method is a probabilistic account of causality; it uses empirical data sets to find patterns of correlation. A variable X is causal to variable Y if X is cause of Y. Two test would be obtain from each analysis, the first examines the null hypothesis that the variable Y does not Granger-cause variable X and the second test examines the null hypothesis that the X does not Granger-cause Y. If we fail to reject the former null hypothesis and reject the latter, then we conclude that Y changes are

Granger-caused by a change in X. The null hypothesis is rejected if the probability value is more than 5% otherwise do not reject the null hypothesis if the probability value is less than 5%. Unidirectional causality will occur between two variables if either of the null hypothesis is rejected. Bidirectional causality exists if both null hypotheses are rejected and no causality exists if neither of the null hypothesis is rejected.

Table 6. Pairwise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG(ESRX) does not Granger Cause GDPGR	32	1.511	0.237
GDPGR does not Granger Cause LOG(ESRX)		0.338	0.9238
LOG(ESCX) does not Granger Cause GDPGR	32	1.579	0.216
GDPGR does not Granger Cause LOG(ESCX)		1.075	0.425
LOG(ADCX) does not Granger Cause GDPGR	32	4.466	0.0072
GDPGR does not Granger Cause LOG(ADCX)		0.308	0.939
LOG(ADRX) does not Granger Cause GDPGR	332	2.741	0.048
GDPGR does not Granger Cause LOG(ADRX)		0.415	0.878
LOG(SCSCX) does not Granger Cause GDPGR	32	1.842	0.152
GDPGR does not Granger Cause LOG(SCSCX)		1.130	0.396
LOG(SCSRX) does not Granger Cause GDPGR	32	1.084	0.419
GDPGR does not Granger Cause LOG(SCSRX)		0.896	0.534
LOG(TCX) does not Granger Cause GDPGR	32	0.207	0.979
GDPGR does not Granger Cause LOG(TCX)		0.596	0.534
LOG(TRX) does not Granger Cause GDPGR	32	0.357	0.914
GDPGR does not Granger Cause LOG(TRX)		1.235	0.344

The Pairwise causality test in table 6 suggests the following:

(i)   There is a uni-directional causality from ADCX to GDPGR significant at 5%level, i.e administration capital expenditure contributes to economic growth rate.

(ii)   There is a uni-directional causality from ADRX to GDPGR significant at 5%level, i.e administration capital expenditure contributes to economic growth rate.

This study tandem with Keynesian hypothesis which stated that increase in government expenditure would lead to economic growth, also, this findings conform to the findings of Komain et at. (2007), Olugbenga and Owoeye (2007) and Nwachuku, Agbi and Okoro (2016).

6. Conclusion and Recommendations

6.1. Conclusion

This paper assessed the relationship between public expenditure and economic growth in Nigeria with the use of annual data between 1981 and 2019. Based on the empirical results and discussion of findings, it is concluded that the variables co-integrate as revealed in the Bound test. Also from the findings we concluded that there is both the long-run and the short-run relationship Nigeria economic growth and public expenditures.

Furthermore, it is also concluded from the result that, administrative recurrent expenditure, social and community services capital expenditure and social and community services recurrent expenditure had positive relationship with economy growth, while economic services recurrent expenditure, economic services capital expenditure, Transfers capital expenditure and Transfers recurrent expenditure had negative relationship with economy growth. And administration capital expenditure had no impact on the economy growth. Moreover, it is concluded that Bound test confirmed that the variables cointegrated. Granger causality shows that there is uni-directional causality test from administration capital expenditure, administrative recurrent expenditure to economic growth rate.

6.2. Recommendations

The focus of this study is to establish the nexus between public spending and economic growth in Nigeria. Having done the analysis and obtained the results as presented and discussed in the previous section, I recommend the appropriate policies that will show the way forward out of this predicament as revealed in this study.

I. The study revealed that both recurrent and capital expenditure on social and community services like education, health etc had positive impact on the economic

growth, therefore government should increase her spending in these sectors to boost the economy and to move towards achieving vision 2030.

II.   Since the study showed that capital and recurrent expenditure on transfer like debt services, pension and gratuities, contingencies and subventions had a negative effect on the economy, the budgetary allocation to this sector should be kept as low as possible. Also government should reduce her borrowing in order to reduce debt services.

III. Since the revealed that administrative recurrent expenditure contributes to economic growth while administration capital expenditure impede economic growth therefore, government should increase its expenditure on administrative recurrent expenditure at the expense of administration capital expenditure.

IV.   Furthermore, the study revealed recurrent and capital expenditure on economic services like agriculture, construction, transportation and communication had negative impact on the economy, as against the positive impact that it was expected to have therefore government should monitor the proper disbursement of the allocated fund, block all loopholes and ensure full implementation of budget.

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