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THE IMPLICATION OF GOVERNMENT CAPITAL EXPENDITURES ON NIGERIAN ECONOMY

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ABSTRACT

This research is set out to investigate the implications of government capital expenditures on the growth and development of Nigerian economy. The main objective of the work being to find if the government capital expenditures negatively or positively affects the Nigerian economy. The study covers a period of twenty years from 1998-2017, employing both primary and secondary data. The variables studied In the course of work are recurrent expenditure, social service expenditure and total expenditure as explanatory variables and Gross domestic product as responding variable. Time series data source from central bank of Nigeria for the various years. Co-integration analysis using the Augmented Dickey Fuller (ADF) unit root test, Johansen Co-integration and Vector Error Correction techniques of estimation which provides coefficient estimates of the time-series data used in analysis. From the study it was found that government capital expenditure has positively significantly affect on Nigerian economy. The study recommends that more strategic and effective policies be made directed in building capital stock especially those that can lead to employment and production.

KEYWORDS; *Government, Capital Expenditure, recurrent capital Expenditure, Gross domestic products.*

INTRODUCTION

The need to better the lots of citizens through government expenditure has raised questions on the impact of government expenditure on economic development and growth of nations. In Nigeria and other developing economies, over the years, there has been a steady increase in government spending without an appreciable increase in economic growth and development. These have led to several researches and interest on the role of government spending in the long term growth of national economies by economists. The revival of interest in growth theories has also revived interest among researchers in verifying and understanding the link between government fiscal policies and economic growth.

In Nigeria for instance, despite the huge amount of public expenditures, there is still an insignificant level of development witnessed. Public expenditure on all sectors of the Nigerian economy is expected to lead to economic growth in the sense that capital and recurrent expenditure will boost the productive base of the economy which in turn will lead to growth. The interest by economists in Nigeria and other jurisdictions on the role of government expenditure is still inconclusive. Barro (1990) endogenize government spending in a growth model and analyze the relationship between size of government and rates of growth and saving. He concluded that an increase in resources devoted to non-productive government services is associated with lower per capita growth. Therefore, government

expenditure which enhances economic growth should be tailored towards productive services.

According to Barro and Grilli (1994), Government spending (or government expenditure) includes all government consumption and investment but excludes transfer payments made by a state. Government expenditure can be for the acquisition of goods and services for current use to directly satisfy individual or collective needs of the members of the community or it can be for acquisition of goods and services intended to create future benefits such as infrastructure investment and the expenditures can represent transfers of money, such as social salaries and cost of administration.

Therefore, Government expenditure (like expenditure by private sector firms) can be categorised into either current expenditure or capital expenditure. Current expenditure is recurring spending or, in other words, spending on items that are consumed and only last a limited period of time. They are items that are used up in the process of providing a good or service. In the case of the government, current expenditure would include wages and salaries and expenditure on consumables - stationery, drugs for health service, bandages and so on. By contrast, capital expenditure is spending on assets. It is the purchase of items that will last and will be used time and time again in the provision of a good or service. In the case of the government, examples would be the building of a new hospital, the purchase of new computer equipment or networks, building new roads and so on. The breakdown between these two types of spending is very important. While capital expenditure has a lasting impact on the economy and helps provide a more efficient, productive economy. Current expenditure, however, doesn't have such a lasting impact. Once the money is spent, it is gone and the effect on the economy is simply a short-term one. It is against the importance of these two categories of expenditure and the increasing quantum made by the Nigeria government over the years that, this seminar paper examines the impact of government expenditure on economic growth in Nigeria from 1987 to 2017.

OBJECTIVE OF THE STUDY

This research is designed to determine what public expenditure is and its effectiveness in promoting economic growth in Nigeria. the specific objectives the study expects to achieve are;

1. To examine the effect of total recurrent expenditure on the growth of Nigeria economy;
2. To examine the relationship between capital expenditure and the growth of Nigeria economy.

1.5 Research hypotheses

The following hypotheses are formulated in line with the objectives of the study and are designed to guide the research work.

Ho1: The total government recurrent expenditure has

no positive effect on the growth of Nigeria Economy;
H02: There is no significant relationship between capital expenditure and the growth of Nigeria economy.

LITERATURE REVIEW

Empirical literature

Expenditure is an outflow of resources from government to other sectors of the economy whether required or unrequired. It is divided into recurrent and capital expenditures. While recurrent expenditures are payments for transactions within one year, capital expenditures are payments for nonfinancial assets used in production process for more than one year.

Oluwatobi and Ogunrinola (2011), in their research, studies Government expenditure on human capital development, It's implication on Nigeria economic growth with the Objective of finding out the impact of Government recurrent and capital expenditure on Education and health in Nigeria and their resultant effect on the growth of the economy, their findings showed that there exists a long run relationship between the variables used as proxy for human capital development—CE and RE—and economic growth in Nigeria. In their opinion, economic growth in Nigeria depends on human capital, among others, in the long run. The result shows that physical capital (K) and government recurrent expenditure on human capital (RE) are positively correlated with the level of real output, while there exists a negative relationship between government capital expenditure in human capital (CE) and the level of real output (Y). The reason for this relationship can possibly be traceable to the much reported corruption and misappropriation of public funds (Transparency International, 2011) allocated for capital projects such as the installation of educational and health infrastructure in Nigeria. As at 2010, Nigeria scored 2.4 out of 10 in terms of transparency and the country made a position of 134 out of 178 (Transparency International, 2010).

Modebe, Okafor Onwumere and Imo,(2012), examined the impact of government expenditure (disaggregated into recurrent and capital expenditure) on economic growth from 1987 to 2010. The result of their findings reveals that total government expenditure had not impacted positively on economic growth. This is in agreement with the finding of Oluwatobi et.al.

Ojong, Ekpo & Ogar,(2016). In their empirical research on Government Expenditure and Its Implications on Nigerian Economy, pursued an objective aimed at determining what public expenditure is and its effectiveness in promoting economic growth in Nigeria. The result from their multiple Regression analysis established that public expenditure in the Nigeria economy increase the level of output. It is a variable option which is often to bring about income and employment stability in an economy. The results

showed that both capital and recurrent expenditure have positive and significant impact on economic growth. The estimated results revealed that public expenditure is incurred by the government for maintaining itself and the economy as a whole.

Udoka & Anyingang (2015) tested The Effect of Public Expenditure on the Growth and Development of Nigerian Economy (1980-2012) using Ordinary least square multiple regression statistical technique, The results showed that both capital and recurrent expenditure have a positive and significant impact on economic growth and development, Indicating that public expenditure in the Nigerian economy increases the level of output and in turn boosts the economic growth if the funds are efficiently utilized.

Oziengbe (2013), employed the use of multiple linear regression analysis, in line with the findings of Udoka et al, (2015), Imo et al, (2012), confirm the evidence of Wagner's theory. Government expenditure has been a significant driver of Nigeria's economy, though the speed tends to be retarded or —slowed down by the dominance of recurrent expenditure.

Similarly Onakoya and Somole (2013) employ the three -stage least square simultaneous equations estimation technique to examine the impact of public capital expenditure on economic growth in Nigeria in the context of macroeconomic framework at sectoral level. The empirical results reveal that public capital expenditure contributes significantly to economic growth in Nigeria. The results also show that public capital expenditure directly, positively impacts the output of oil and manufacturing, but adversely affected the output of manufacturing and agriculture. The impact on the services sector is however observed to be insignificant. Further evidence from the empirical results is that public capital expenditure indirectly enhances economic growth by encouraging private sector investment attributable to the facilitating role of government in the provision of public goods/infrastructure.

It's been observed that the major challenge facing the global community is how to achieve sustainable development. IMF (2002), sustainable development is made up of three pillars. They are economic development, social development and environmental protection. The essence of these pillars are to maintain and enhance the capacity and capability of future generations while meeting the needs of the present generation. To accomplish these multi-dimensional tasks, human capital should be strategically cultivated and positioned for the preservation of both the present and the future economic growth and development. Stating Lyakurwa (2007), human capital development has the capacity to enlarge people's choices and opportunities, improve healthy living through acquired skills and knowledge

and eventually enhance growth in the nation's gross domestic product through increased productivity.

Gukat and Ogboru(2017), in their investigation on the impact of government expenditure on economic growth in Nigeria for the period 1981–2016. The empirical analysis using co-integration reveals there is a long-run relationship between the federal government expenditure on selected variables and economic growth in Nigeria, Despite increasing federal government expenditure over the study period, there had not been significant impact of government expenditure particularly, capital expenditure on economic growth in Nigeria.

Based on the findings of the study, it could be concluded that government expenditure has not translated into meaningful economic growth.

Theoretical Exposition

There are various theories underlying public expenditure; these theories provides the framework around which ideas and knowledge about the study are organized. The theories relevant to this study include:

The Wagner's Law

This law was put forward by a German political economist, Adolph Wagner (1865 – 1917), as cited by Bonmwa Gukat & Ogboru (2017). This law is known as the law of increasing state activities. Wagner is of the opinion that the growth of any economy is facilitated or enhanced by increased industrialization process, as per capital income increases, so also public expenditure increases. The wagner school holds that the growth of an economy is accompanied by an increase in the share of public expenditure

The Keynesian School of Thought

This theory holds that public expenditure could be manipulated to affect the level of national income thus an increase in public expenditure leading to an increase in national output.

The Displacement Theory

This theory was propounded by Jack Wiseman and Allen t. Peacock in 1962. This theory state that public expenditure does not increase at a steady rate continuously but rather in Jerks and Step like manner. According to Wiseman and Peacock, 1962, disturbances like war may kick up government expenditure for instance Boko Haram insurgency which has brought about increase in public expenditure in the area of security. However, with this increased expenditure, government tends to fall short of revenue, leading to upward review of taxes, even when it is not favorable for the citizens. This research is hung on the Wagner's Law, the theory suits or fits this work mostly because it holds that the growth of an economy is enhanced by increase in public expenditure.

3.0 METHODOLOGY

The study used time series data and is predicated on ex-post fact research design. The time series data

used covered the period of 1998 to 2017 (twenty years). The study used capital expenditure, recurrent expenditure, social service expenditure, and total expenditure as explanatory variables and gross domestic product Per Capita as response variable. Time series data source from central bank of Nigeria for the various years. Co-integration analysis using the Augmented Dickey Fuller (ADF) unit root test, Johansen Co-integration and Vector Error Correction techniques of estimation which provides coefficient estimates of the time-series data used in analysis.

Modeling Specification

$$GDP = f(TOEXP, RECEXP, CAPEXP, SOSERV)$$

.....1

This can mathematically expressed as

$$\ln GDP = a_0 + a_1 \ln TOEXP_{t-1} + a_2 \ln RECEXP_{t-1} + a_3 \ln CAPEXP_{t-1} + a_4 \ln SOSERV_{t-1} + E_t \dots\dots\dots 2$$

Where: GDP = Gross Domestic Product Per Capita, RECEXP = recurrent expenditure, CAPEXP= capital expenditure, SOSERV = social service, TOEXP = total

expenditure, ln = Natural Log, E = Random Error Term, t-1 = Time lag, a₀ = constant, t = time serial proxy, a₁, a₂, a₃, a₄ and a₅ are the coefficient of the regression equation. The study uses natural logarithm (ln) to reduce all the value of the variable used in the study to the same unit to avoid the possible effect of outliers.

4.0 DATA ANALYSIS AND INTERPRETATION

The study used the descriptive statistics to explore the nature of the data collected for the study. Granger causality was used to test the long run causal effect relationship that existed between the data, the unit root test was used to test for the stationarity of the data while error correction model (ECM) was used to capture the short and long behaviour of the variables. The results are presented below.

Table 4.1 provides the summary of the descriptive statistics of the sampled companies.

Table 4.1 Descriptive Statistics

	<i>GDP</i>	<i>TOEXP</i>	<i>RECEXP</i>	<i>CAPEXP</i>	<i>SOSERV</i>
<i>Mean</i>	45678204	10973323	1.13E+08	1820246.	2387989.
<i>Maximum</i>	69023930	17179495	8.62E+08	25267542	28957710
<i>Minimum</i>	22332867	4475241.	48515829	145374.7	180225.0
<i>Std. Dev.</i>	16937118	4173608.	1.77E+08	5540644.	6291548.
<i>Jarque-Bera</i>	1.728329	1.278747	241.2026	237.2615	232.9302
<i>Probability</i>	0.214904	0.527623	0.000000	0.000000	0.000000
<i>Observations</i>	20	20	20	20	20

Source: researcher’s summary of descriptive statistics (2018).

Table 4.1 provides some insight into the nature of the time series data used for the study. From the table above, we observed that within the period under study, recurrent expenditure value (mean) is about six times higher than the capital expenditure, this relationship shows that only small proportion of government expenditure is directed toward building

capital stock. The expenditure on capital project is lower than expenditure on social security and other social cost. The Jarque-Bera (JB) which test for normality or existence of outlier shows that all the variables are normally distributed at 1% level of significance accept total expenditure and gross domestic product.

Unit Root Test

The stationarity of the data used were tested by unit root test using Augmented Dickey Fuller test.

Variables	Order of integration	ADF	1% (CV)	5% (CV)	10% (CV)
GDP	1 (1)	-3.481166	-3.857386	-3.040391	-2.660551
RECEXP	1 (0)	-4.203555	-3.831511	-3.029970	-2.655194
CAPEXP	1 (0)	-4.440976	-3.831511	-3.029970	-2.655194
SOSERV	1 (0)	-6.989251	-3.959148	-3.081002	-2.681330
TOEXP	1 (1)	-3.488358	-3.831511	-3.029970	-2.655194

Source: Researcher’s summary of unit root test

The Augmented Dickey Fuller stationarity result shows that in recurrent expenditure, capital expenditure and social service are stationary at level order. While total expenditure and gross domestic

product are stationary at first order, that is after first differential was taken.

Granger Causality Tests

Pairwise Granger Causality Tests

Date: 10/04/18 Time: 05:54

Sample: 1998 2017

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
TOEXP does not Granger Cause GDP	19	3.42578	0.0827
GDP does not Granger Cause TOEXP		0.45226	0.5109
RECEXP does not Granger Cause GDP	19	1.49017	0.2399
GDP does not Granger Cause RECEXP		4.09505	0.0600
CAPEXP does not Granger Cause GDP	19	0.20002	0.6607
GDP does not Granger Cause CAPEXP		0.42801	0.5223
SOSERV does not Granger Cause GDP	19	0.48092	0.4979
GDP does not Granger Cause SOSERV		8.24837	0.0111

From the result, we observed that total expenditure granger cause economic growth and economic growth granger does not granger cause total expenditure. This shows that economic growth and total expenditure does not have linear relationship. This also means that level of total expenditure does not lead to economic growth of Nigeria, but economic growth does not necessarily lead to increased expenditure. Secondly, we observed from the result that recurrent expenditure does not granger cause economic growth but economic growth granger cause recurrent expenditure. Spending much on recurrent expenses does not lead to economic growth, but the economic growth lead to increase in recurrent

expenditure. Thirdly, we observed from the result that capital expenditure does granger cause economic growth but economic growth granger does not granger cause capital expenditure. The result indicates that if more fund is committed to infrastructural (capital expenditure) development, it will increase the level of economic growth in Nigeria. But the level of economic growth does not lead to increase in capital expenditure. We observed from the result that social expenditure does not granger cause economic growth but economic growth granger cause social expenditure. Spending on social security does not lead to growth of the economy, but the economic growth lead to increase in social expenditure.

Vector error correction mechanism

The error correction model (ECM) was used to capture the long-run behaviour of the variables.

Variables	Coefficient	T-statistics	Probability -value
D (RECEXP(-1))	(0.00019	0.9556	0.1690
D (CAPEXP(-1))	0.00596	19.0592	0.0135
D (SOSERV(-1))	0.00506	0.02661	0.0001
D (TOEXP(-1))	0.05594	1.84510	0.1032
ECM (-1)	0.6976	4.3844	0.0082
R-sq(adj)	0.6995		
F-statistics	69.663		
F-statistics Prob. Value	0.0000		

Source: Researcher (2018) summary from e-view software 8.

The result reveals that RECEXP with one year lag has no statistical significant effect on economic growth of Nigeria. CAPEXP, and SOSERV with one year lag has statistical significant effect on the economic growth in Nigeria. The long-run error correction mechanisms (ECM) proved to be

statistically significant in correcting the disequilibrium at lag one in the model. It shows that about 70% (0.6976) correction is made to the disequilibrium result from the co-integrating vector, at every one year to adjust it to its equilibrium root. This also means that government expenditure adjusts rapidly to changes in

the economic growth variables. The R-squared adjusted of 0.6995 shows that the government expenditure variables can jointly affect about 70% of changes in economic growth of Nigeria. The F-statistic probability value of 0.0000 shows that the regression result is statistically significant.

CONCLUSION AND RECOMMENDATIONS

The co-integration results show that there is a long run relationship between government expenditure and economic growth. The Vector Error Correction mechanism shows that government expenditure has direct impact on the economic growth of Nigeria. Thus, government desire to achieve sustainable economic growth and development can be fulfilled through effective government expenditure policy directed in building capital stock especially those that can lead to employment and production.

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