EXPENDITURE OF GOVERNMENT AND ITS RELATIVE IMPACT ON THE EXPANSION OF THE ECONOMY: NIGERIA AS A CASE STUDY

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Abstract
This study examined the expenditure of government and its relative impact on the expansion of the economy, using Nigeria as a case study. The study adopted ex-post facto research design which focused on investigating relationship between variables especially where relationship already exist and cannot be manipulated. The study began with a conduct of unit root test using the Augmented Dickey- Fuller technique to determine the stationarity properties of the data employed and the result showed that the variables were stationary at first differencing and integrated of order one. The Johansen co-integration test was used to determine the relationship between government expenditure and economic growth. The result showed presence of long run relationship between government expenditure and gross domestic product. The result also indicates that government recurrent expenditure has negative and insignificant effect on real gross domestic product while government capital expenditure had positive and significant impact on economic growth in Nigeria. Based on these findings, the study concluded that government capital expenditure has huge significant impact on economic growth in Nigeria and recommended among others that; government should make effort to ensure that both recurrent and capital expenditure are managed in a way they can transform the country's growth through strict adherence of the budget principle. Capital projects like construction of dams, roads, and building of hospitals should be undertaken and properly monitored by separate government agency as they tend to promote economic growth.

Keywords: Government expenditure, Economic growth, Ex-post facto design, Expansion.

1. Introduction

Over the years, the need to better the lives of citizens has been the interest of every good government whether developed or developing economy. The achievement of this goal is not automatic; rather, it requires government expenditure. Hence, government expenditure plays an important role in the functioning of an economy whether developed or under developed (Iheanacho, 2016). That is why there is a common consensus among the researchers that public sector expenditure is as an important instrument which the government uses to influence the performance of the economy (Onifade, Evik, Erdo˘gan, Asongu & Bekun, 2020).

The emergence of public expenditure in achieving macroeconomic objectives has been a topical issue between two contending proponents; the Wagnerians and Keynesians presenting two parallel and polarized views in terms of the relationship between public expenditure and growth. According to Essien (1997), Wagner introduced a model showing that public expenditures are endogenous to economic growth and that there exist long-run tendencies for public expenditure to grow relatively to some income aggregates such as the Gross Domestic Product (GDP). Keynes (1936) however, argued that the causality between public expenditure and national income runs from public expenditure to national income. Perspectives of variations growth models open for further discourse.

Interestingly, achieving sustained economic growth is a macro-economic objective that every name drives at achieving. Undoubtedly, Ijuo and Andohol (2020) observed that ensuring rapid and sustainable economic growth and development is a major goal of most economies of the world (to which developing countries, Nigeria to be specific is not left out in the pursuit). Accordingly, government spending has formed a point of debate for achieving economic growth in public economics. This is important for developing countries like Nigeria, most of which have experienced an increasing level of public expenditure over time. This tends to be associated with rising fiscal deficits, resulting from an inadequate system of expenditure control, intense competition for funds among various Ministries, Agencies, and Departments (MDAs), suggesting their limited ability to raise sufficient revenue to finance higher levels of government expenditure (Iheanacho, 2016). For instance, between 2010 and 2015 total government expenditure increased from ₦153.9 billion to ₦5.06 trillion while GDP continued to wobble between 4.9% in 2010 and 2.7% in 2015 with less than 1% in the first and second quarters of 2016 (Onifade etal, 2020)

Nigeria's government expenditure has increased from the level of million to billion naira and postulating to trillion naira on the expenditure side of the budget in the last decade. This will not be surprising if the economy is experiencing surplus or equilibrium on the records of the balance of payment or if there are infrastructures to improve commerce with the system or social amenities to raise the welfare of the average citizen of the economy. All these are not there, yet we always have a very high estimated expenditure. This indicates that something is wrong either with the way government expands the budget or with the way and manners it has always been computed.

The mismatch between the performance of the Nigerian economy and the massive increase in government total expenditure over the years raises a critical question on its role in promoting economic growth and development in Nigeria. Government spending as argued by various scholars has significant effects on economic growth. Whenever the rate of government capital expenditure on health and education for instance increases, the outcome is a higher rate of economic growth. Available statistics suggest that Nigeria's public expenditure as a proportion of GDP has rather dipped down between 1970 and 2019. For instance, the average public expenditure as a proportion of GDP for the period 1970-79 stood at about 21.07 percent, which slightly rose to 21.57 percent in 1980-89 (CBN, 2020). However, it went down continually; 14.07and 7.67 percent in 1990-99 and 2000-09 respectively. This means Nigerian government reduces its size and involvement in economic activities.

This could be linked to the process of deregulating the economy that begun in the 1980swith the introduction of the Structural Adjustment Programme. More so, between 1970 and1999, capital expenditure as a proportion of total government expenditures had been high and on increase until 2000 - 2009 when it dipped to 30.88 percent from an average of about 48.87 percent and further decline to 16.16 percent in 2010 – 2019. This falling trend may be connected to the global economic crisis of 2008 and 2009 and the process of transition from a military regime to democratic dispensation between 1998 and 1999.Additionally, total government expenditure has been on the increase unabatedly for the period of 1970 - 2019 in Nigeria and a decadal breakdown shows that the average annual growth rate of total government expenditure are around 23.20, 41.24, 15.82,and 11.82 percent over the periods 1980-89, 1990-99, 2000-09 and 2010-2019 respectively (CBN, 2020). Therefore, having observed the above problem, the need to empirically ascertain the impact of government expenditure on economic growth in Nigeria is felt'

2. Literature Review

2.1 Conceptual Review

The roles of government to allocate, distribute, and stabilize the economy whether primitive society or modern society demands the need for finance. Finance is a prerequisite for government to perform far reaching responsibilities not only the provision of goods and services but also to be an agent and catalyst of economic growth and development through numerous programmes and policies (Iheanacho, 2016). Public expenditure which has a functional relationship with public revenue is one of the instruments used by the government to bring about growth in the economy. Public expenditure is derived from public revenue which the government incurs for its own maintenance, benefit of the society and external bodies (Oyinlola, & Akinnibosun, 2013). The former corresponded to government's purchase of current goods and services (labour, consumables, wages and salaries, etc.), while the latter would ideally include not merely investments in infrastructure (roads, schools, hospitals, etc) but also all other expenditures that might contribute to development. In other words, while the recurrent expenditure refers to financial outlays necessary for the day-to-day running of government businesses, the capital expenditure refers to investment outlets that increase the assets of the state. These categorization, however, were not mutually exclusive but were indeed inter-linked. For instance, while capital expenditure gave rise to recurrent expenditure in most cases through the operational and maintenance costs of completed capital projects, the amount available for investment was a function of not only the size of revenue but also the amount that goes annually into the running of government (Agbonkhese & Asekome, 2014).

2.1.1 Economic Growth

Jhingan (2007) defines economic growth as the quantitative sustained increase in a country's per-capita output or income which is accompanied by an increase in the labor force, consumption, and volume of trade. Andohol (2012) supports this definition as he posits that, economic growth is the process that leads to a sustained increase in the output of goods and services per head. On the other hand, Todaro and Smith (2011) define economic growth as the increase in the market value of goods and services produced by an economy over time. It is conventionally measured as the percentage of increase in real Gross Domestic Product (GDP). For this study, Todaro and Smith's definition of economic growth as the increase in the market value of goods and services produced by an economy over time is adopted. Similarly, GDP real values were used, this is to circumvent the problem of nominal series (values) which incorporate a price component that can obscure the fundamental features that we are interested in. This is particularly problematic when two nominal variables are being compared, since the dominant price component in each will produce close matches between the series, resulting in a spuriously high correlation coefficient (Oyinlola etal, 2013).

2.1.2 Government Expenditure and Economic Growth

There appears to be a consensus in the research that for a country to progress in its sustainable development goals, as advanced by the United Nations Development Programme (UNDP, 2015). Sustainable development goals, there is a need for strong growth in national income. Improvements in infrastructure quality and economic growth are also necessary because, clearly, economic growth will affect citizens' lives positively, such as in the area of poverty reduction.

Government spending is critical. However, some academic research has established that government spending is harmful to economic growth because large public sectors reduce the level of economic activity and, as such, the level of economic growth (Mitchell, 2005); while other studies find that government spending improves production and economic growth (Aregbeyeni, & Kolawole, (2015). The inconsistencies in research findings call for concern, especially in matters of this nature which affect citizens' welfare. Hence, this study attempts to probe into the relationship between government spending and economic growth.

2.2 Theoretical Frame Work

2.2.1 Wagner Theory

Adolph Wagner propounded government expenditure theory in 1893. The public sector has a role to play in society to ensure the smooth running of economic activities. Also, the goals of government are sometimes numerous and have several stakeholders involved. Therefore, to avoid chaos, efficiency and equity should guide public spending (Hindrizia & Myles, 2005). This theory explains that efficiency concerns the smooth running of public activities. Efficiency has to do with the coordination, collection and monitoring of government revenue and expenditure towards the provision of services to the stakeholders. Equity is about the fair sharing of public gains among stakeholders. The applicable public expenditure theory in this study is based on Wagner's law, known as the law of increasing state spending. Wagner's law was formulated by Adolph Wagner (1835–1917). The theory states that for any country, public expenditure constantly rises as income growth expands. According to Molefe and Choga, (2017)), Wagner's law stipulates that in the process of economic development, the share of the public sector in GDP has been increasing over time. Thus, it explain that the law is premised on four principles, as follows: that growth results in increased complexity because there are new and continuing increases in public expenditure; that public expenditure increases result in urbanization and externalities; that the goods supplied by the public sector should have a huge income elasticity of demand; and that growth results in an increase in demand with a resultant increase in public expenditure. This study expects that if growth in expenditure matches economic growth, then it should also translate into economic development; however, this has not been the case in reality in developing nations like Nigeria because sometimes there are elements of fiscal illusion in government activities.

2.2.2 Keynesian Theory

The theories forming the basis of Keynesian economics were first presented by the British economist John Maynard Keynes (1936). The general theory of employment, interest and money during the Great Depression in his book The General Theory of Employment, Interest and Money. According to Blinder (2008), Keynes contrasted his approach with the aggregate supply-focused classical economics that preceded his book. The interpretations of Keynes that followed are contentious. Keynesian theory presupposes that government intervention can stabilize an economy, especially during a recession when there is little money to spend. The theory argues that with government technological intervention, there is increased spending and employment (Jahan, Mahmud, & Papageorgiou, 2014). However, some scholars, such as Aregbeyeni & Kolawole 2015), argued that Keynesian theory sometimes fails because lower tax rates have been found to boost economic growth. The study states that the Keynesian mindset is still alive among politicians and journalists, who often advocate the need to raise spending to enhance growth. Keynes believed the role of the government to be crucial as it can avoid depression by increasing aggregate demand

and thus, switching on the economy again by the multiplier effect. It is a tool that bring stability in the short run but this need to be done cautiously as too much of public expenditure lead to inflationary situations while too little of it leads to unemployment (Abu, 2010).

2.3 Empirical Literature

Onuoha and Okoye, (2020) examined the effects of aggregate public expenditure, recurrent government expenditure, and capital government expenditure on economic growth, and the effect of economic growth on aggregate public expenditure. Using OLS technique, these resaerchers found that both recurrent government expenditure and capital government expenditure have insignificant effects on economic growth.

Similarly, Srinivasan (2013) examines the causal nexus between government expenditure and output growth in India. The results indicate one-way causality running from economic growth to government expenditure in the short-run and long-run. Forte and Magazzino (2016) examined the nexus between public spending and out- put growth using Italian data spanning from1861 to 2008 and the finding established a non-linear relationship between public spending and economic growth for Italy.

In another study by Dudzeviciute, Simelyte, and Liucvaitiene (2018) using data for eight European Union member countries found a strong positive association between public spending and economic growth. Idris and Bakar (2017) and Ihugba and Njoku (2017) found a positive impact of government expenditure on output growth. Chimobi(2016) investigated national income and government expenditure nexus in Nigeria and found that there is a stable long-run relationship between the fiscal variable and economic growth.

In contrast, Oktayer and Oktayer (2012) investigated the nexus between public spending and output growth using Turkish data for the period 1950-2010 and found no long-run co-integration between the variables of interest. Molefe and Choga (2017) analyzed the impact of government expenditure on economic growth in South Africa over the period 1990-2015 using the VECM model. Their results suggested that government expenditures have a negative long-run relationship with economic growth.

Additionally, Olayungbo and Olayemi (2018) using Vector Error Correction Model for 1981-2015 Nigerian data established government expenditure have a negative and significant impact on economic growth in both the short and long run. While controlling for structural breaks in the ARDL model, Awode and Akpa (2018) supported the findings of Olayungbo and Olayemi (2018); though the findings of the former are insignificant. These studies' findings neither contradict nor affirm the submissions of neoclassical growth models and Wagner's law. This is debatable given that the findings are established in developing countries battling with bribery and corruption.

3. Research Design and Methodology

Research design constitutes the blueprint for the collection, measurement, and analysis of data (Atuma, Edeh, Agwu, Chukwuajah & Nkwagu, 2024). The data for this research work are obtained from the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics. This study adopts ex post facto research design since it explores cause and effect relationships where causes already exist and cannot be manipulated. Hence, Unit root test and Vector Error Correction Model (VECM) model were employed as the method of analysis. The test of unit root was used in the research to determine the order of integration of the variables of the study; while the VECM technique was adopted for the examination of the magnitude or elasticity of the coefficients of the independent variables in relation to the dependent variable. In capturing the study, these variables were used as proxy:

GDP = f (GCEXP, GREXP, INTR) 1

Explicitly, equation (1) above is transformed into an econometric linear log form as structurally expressed as:

$$LGDP_t = b_0 + b_1 LGCEXP_t + b_2 LGREXP_t + INTR + \varepsilon_t \quad 2$$

Where; GDP = Gross Domestic Product; GCEXP = Government Capital Expenditure; GREXP = Government Recurrent Expenditure; INTR = Interest rate, L = Log ε_t = Error term; b_{is} = Parameters estimates.

4. Results

Table 1: ADF Unit Root Result Test at Level and First Difference

Test	Variables	At Levels **T- statistic**	5% **Critical**	First Differences **T- statistic**	5% **Critical**	Order	Remark
ADF	LGDP	-1.480919	-3.536601	-3.652981	-3.536601	1(1)	Stationary
	LGRE	-0.566642	-3.533083	-8.601011	-3.533083	1(1)	Stationary
	LGCE	-1.401627	-3.529758	-6.419562	-3.533083	1(1)	Stationary

Source: Researcher`s compilation, 2023 using E-view 9.0

Table 2: Phillip Perron Unit Root Test Results (Trend and Intercept @ level) at Level and First Difference

Test	Variables	At Levels	5%	First Differences	5%	Order	Remark
		T- statistic	**Critical**	**T- statistic**	**Critical**		Stationary
ADF	LGDP	-2.533430	-3.529758	-3.365419	-2.941145	1(1)	Stationary
	LGRE	-0.921106	-3.529758	-8.741515	-3.533083	1(1)	Stationary
	LGCE	-1.522728	-3.529758	-6.417896	-3.533083	1(1)	Stationary

Source: Researcher`s compilation, 2023 using E-view 9.0

Table 1 and 2 above showed the summary of unit root and Phillip Perron test results. The result shows that the variables; LGDP, LGRE and LGCE were not stationary at levels using Augmented Dicey Fuller test. The reason for their non stationarity is because their critical values were less than ADF test statistics in absolute value at 5 percent level of significance. Nevertheless all the variables considered became stationary after the first difference since their ADF test statistics were greater than their critical values in absolute value. The results show that the series are integrated of the same order; 1(1) Therefore, the variables are fit to be used for the analytical purpose for which they were gathered.

Table 3: Johansen Co-Integration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.472956	32.70122	24.27596	0.0035
At most 1	0.177867	9.003776	12.32090	0.1688
At most 2	0.046382	1.757202	4.129906	0.2175

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

Source: Researcher`s compilation, 2023 using E-view 9.0

Under the Johansen Co-integration test, for Unrestricted Cointegration Rank Test or Trace value. Co-integration is said to exist if the values of computed Eigen values are significantly different from zero or if the trace statistics is greater than the critical value at 5 percent level of significance. The result of the co-integration in table 3 above indicates one co-integrated equations. Condition to satisfy long run relationship states that the trace statistics or Maximum Eigen value must be greater than the critical value at 5 percent level of significance in atleast one of the hypothesized equations. Similarly, the computed Eigen value is significantly different from zero in three of the hypothesized equations. Hence, the researcher denotes that five of the hypothesized equations satisfy this condition and therefore, the null hypothesis of no co-integration among the variables is rejected in at least three equations. Therefore, there is long run relationship between the variables used for the analysis in Nigeria within the period under study 1981 - 2020.

Table 4: Vector Error Correction Model Result

Standard errors in ( )& t-statistics in [ ]

Cointegrating Eq:	CointEq1
LRGDP(-1)	1.000000
LGRE(-1)	-0.541271
	(0.05174)
	[-10.4621]
LGCE(-1)	0.363006
	(0.06009)
	[6.04133]

C	-9.041068		
Error Correction:	D(LRGDP)	D(LGRE)	D(LGCE)
CointEq1	-0.105477	0.425915	-1.228184
R-squared	0.430716	0.175413	0.316823
Adj. R-squared	0.293302	-0.023625	0.151918
F-statistic	3.134450	0.881305	1.921245

Source: *Researcher`s compilation, 2023 using E-view 9.0*

Co-integrating coefficient for ECM (-1)) equals -0.105477 which showed that the speed of adjustment between the short-run and long-run equilibrium is approximately 10 percent annually. This means that the system corrects its previous period disequilibrium at a speed of 10% annually with a negative sign, fractional and a statistically significant ECM (-1) as shown by the probability value of 0.0251, the statistical significance of the co-integrating equation satisfies all conditions and the negative sign satisfies the other condition.

From the estimated result above the coefficient of the constant term is -9.041068 implying that when other variables are kept constant price stability decreased by 9.041068 units. Similarly, the coefficient of government recurrent expenditure representing (-1) is -0.541271 indicated that, a unit increase in government recurrent expenditure brought about 54 billion naira decrease in gross domestic product in Nigeria. While government capital expenditure value of 0.363006 showed a positive relationship with economic growth. Thus, a unit increase government capital expenditure brought about 36 billion naira increase on economic growth in Nigeria within the period under review.

It was revealed that the R^2 is 0.430716%. This is means that 40 % of the total variation in dependent variable (gross domestic product) is well explained by the independent variables (government recurrent expenditure and government capital expenditure), while the remaining 60% was due to disturbance or error term such as, economy meltdown, low-productivity, and low profitability.

The overall level of significant shows that the entire influence is statistical significant given the value of the F-statistic of (3.134450) is greater than F-tab. which shows that all the independent variables employed for the study are all significant to economic growth in Nigeria from the year under review.

5. Conclusion

This study examined the impact of government expenditure and economic growth in Nigeria for the period of 1981 to 2021. To this end, capital and recurrent are the major expenditure of government geared towards boosting economic growth, reduction in high level of inflation in the country. Ex-post facto research design is adopted in the research. Multiple regression analysis is the econometric approach employed in the investigation. The variables modeled in the research are gross domestic product as the dependent variables, while Government Capital Expenditure (GCEXP) and Government Recurrent Expenditure (GREXP) are engaged as the independent variables. The study employed the VECM model to estimate the impact of government expenditure and economic growth in Nigeria. The results showed evidence of a long-run equilibrium relationship among the variables used in the study. The result equally indicated that Government Capital Expenditure (GCE) had positive and significant impact on economic growth in Nigeria, while Government Recurrent Expenditure (GREXP) has negative and insignificant influence on economic growth. The study concludes that there is need for government to continue with the policy that will increase both capital and recurrent expenditure in order to increase economic growth in the country.

6. Recommendations

Based on the findings from the study, the following recommendations were made:

- Government should make effort to ensure that both recurrent and capital expenditure are being managed in such a way they can transform the country's growth through strict adherence of the budget principle.
- Capital Projects like construction of dams, roads, building of hospitals, etc should be undertaken and properly monitored by separate government agency as they tend to promote economic growth.

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