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# The Empirical Evaluation of how Public Expenditure Influences Economic Growth in Nigeria

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## I. INTRODUCTION

### a) Background to the Study

An important instrument of government to control the economy of a nation is that of Capital and recurrent expenditure. These two important tools are used sine quo to fine-tune the economy in promoting economic growth. Government expenditure notably on social and economic infrastructure can be growth-enhancing although the financing of such expenditure to provide essential infrastructural facilities including transport, electricity, provision of potable water and good sanitation especially proper waste disposal, provision of quality education and health are key. Inuwa, (2012) stated that the relationship between government expenditure and economic growth has continued to generate sense or controversies among scholars in

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economic literature. Accordingly, the nature of the impact of government expenditure on economic growth is a foregone conclusion, and incontrovertible. While some researchers such as Tuban, (2010) believed that the impact of government expenditure on economic growth is negative or non-significant, others such as Alexiou, (2009) were of the view that the impact is positive and significant. The structure of Nigerian government expenditure is categorized into capital and recurrent expenditure (Muritala 2011). Under the recurrent expenditure lie government expenditures on administration such as wages, salaries, interest on loans, maintenance cost, etc. and that of capital expenses centres on capital project such as construction of trunk and feeder roads, international and local airports, Tertiary, Secondary and Primary education, telecommunication networks, electrification of towns and villages with solar and generating sets or connection to the national grid, building of Hospitals and Dams etc. which are generally referred to as capital expenditure. The pattern of government spending in Nigeria relative to economic growth is still an enigma. The theoretical positions on the subject are quite diverse, making spending a source of economic stagnation as it were. Empirical research does not conclusively see government spending as a stagnation as a few studies found the spending pattern as having a significantly negative relationship between government spending and economic growth in real output of goods and services. It is against this backdrop, that this study is undertaken to empirically evaluate the impact of government expenditure on economic growth in Nigeria.

### b) Statement of Problem

It is of true attestation that the Federal Government of Nigeria's Capital and Recurrent expenditure has continued to rise over the years as a result of huge receipts from production and sales of crude oil, calling forth an increased demand for public goods like construction of more roads, improvement in communication gadgets, increase in power generation, increased educational institution and equipment's and provision of better health services etc. Besides, there has been increasing demands for the government to provide both internal and external security for the people



and the nation. Available statistics revealed that total government expenditure (capital and recurrent) and its component have continued to rise in the past decades. Government total recurrent expenditure increased from N4,846.7m in 1981 to N 7,576.4m in 1990, and N 36,219.60m in 1995, while that of Recurrent expenditure was N461,600.00m and N1, 589,270.00m in 2000 and 2007; and further increased to N 3,314,513.33m in 2011 and N 33,255,178m in 2012. In the same, composition of government recurrent expenditure shows that expenditure on defence, internal security, education, health, agriculture, construction, and transport and communication increased during the period under review (see appendix 1); as government capital expenditure rose from N 6,567m in 1981 to N 8,526m in 1986 and further to N 241,688.3m in 2003. Capital expenditure stood at N 918,500m and N 874,800m in 2011 and 2012, respectively (see appendix 2). We also noticed that the various components of capital expenditure (that is, defence, agriculture, transport, communication, education, and health) also show a rising trend (see appendix 2). Although government spending continued to rise, there has not been any meaningful translated of these expenditures into meaningful growth and development, rather Nigeria was ranked among the poorest countries in the world; and many Nigerians have continued to reel in abject poverty, with no less than 50 per cent of Nigeria's population living on an income of less than the US \$2 per day. As it were the situation is not satisfactory enough, the nation's infrastructure (in terms of roads and power supply) keep on depleting leading to the wounding up of many industries, thereby increasing the already saturated market of unemployment.

More so, macroeconomic indicators like the balance of payments, import obligation, inflation rate, and exchange rate, were not showing any sign of improvement irrespective of the increasing expenditure of the government. The study therefore empirically examines the impact of government expenditure on economic growth

#### c) Objectives of the study

The general objective of this study is to examine the impact of government expenditure on the economic growth of Nigeria. Howbeit, the specific objectives include the followings:

- i. To examine the relationship between government capital expenditure and economic growth in Nigeria.
- ii. To investigate the relationship between government recurrent expenditure and economic growth in Nigeria.

#### d) Statement of Hypotheses

The following hypotheses are used to evaluate the impact of government expenditure on the economic growth of Nigeria.

#### Hypothesis one

*Ho:* There is no significant relationship between government capital expenditure and economic growth in Nigeria.

*HA:* There is a significant relationship between government capital expenditure and economic growth in Nigeria

#### Hypothesis two

*Ho:* There is no significant relationship between government recurrent expenditure and economic growth in Nigeria.

*HA:* There is a significant relationship between government recurrent expenditure and economic growth in Nigeria.

#### e) Definition of Terms

*Economic growth:* This is referred to as a sustained rise in the quantity of the overall goods and services produced in an economy.

*Total government expenditure:* It refers to all government expenses on consumption, investment, and transfer payments which can be financed through government-generated fund through taxes etc. and by borrowing, seignior age, etc.

*Capital expenditure:* It is government money used to purchase, upgrade, improve, or extend the life of long-term assets which are typically property, infrastructure, or equipment with a useful life of more than one year.

*Recurrent expenditure:* This refers to payments made by governments or organization for all purposes except capital cost. Recurrent expenditure includes a payment made on goods and services as well as interest and subsidies.

## II. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

#### a) Conceptual Framework

The need to have a better way of government's expenditure has raised a lot of questions on the impact of government expenditure on economic development and growth of nations. There has been a steady increase in government spending without an appreciable increase in economic growth and development in Nigeria as well as in other developing economies which has led to several types of research. Interest in growth theories has also invigorated interest among researchers in verifying and understanding the link between government fiscal policies and economic growth.

Despite the huge amount of public expenditures, there is still an insignificant level of development in Nigeria which calls for concern. Public expenditure on all sectors of the Nigerian economy is expected to lead to economic growth in the sense that

capital and recurrent expenditure ought to boost the productive base of the economy. The inconclusiveness in interest by economists in Nigeria and other jurisdictions on the role of government expenditure calls for more research.

Barro (1990) while writing on government spending in a growth model analysed the relationship that existed between the size of government and rates of growth. He concluded that an increase in resources devoted to nonproductive government services is associated with lower per capita growth. Therefore, government expenditure which enhances economic growth should be tailored towards productive services.

Barro and Grilli (1994) opined that Government spending includes all government consumption and investment but excludes transfer payments made by a state. Government expenditure is for the acquisition of goods and services for current use in satisfying 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 that the expenditures can represent transfers of money, such as social salaries and cost of administration.

#### i. Economic growth

Economic growth is the process by which national income or output is increased. An economy is said to be growing if there is a sustained increase in actual output of goods and services per head. The rate of economic growth, therefore, measures the percentage increase in real national output, during a period usually a year over the preceding years level (Anyanwocha, 1993).

Todaro and Smith (2007) have defined economic growth as a steady process by which the productive capacity of an economy is increased over time to bring about rising levels of national output and income.

Economic growth is the increase in per capita gross domestic product (GDP) with other measures of aggregate income. It is often measured as the rate of change in real GDP and only refers to the number of goods and services produced in an economy. Economic growth can be either positive or negative; and when the economy is shrinking, we refer to that as Negative growth, which is associated with economic recession and economic depression.

Economic growth refers to an increase in a country's potential GDP, depending on how the national product has been measured. Economic growth must be sustained for a developing economy and to break the circle of poverty a country must pursue a fiscal policy to achieve accelerated economic growth.

Economic growth represents the expansion of a country's potential GDP or output. For illustration, if the social rate of return on investment exceeds the private

return, then tax policies that encourage growth rate and levels of utility can be adopted. Growth models that incorporate public services, encourage optimal tax policy which hinges on the characteristic or types of services rendered.

Tanzi (1994) observed that fiscal policy applies to the use of fiscal instruments of taxation and spending to influence the working of the economic system to maximize economic welfare with the overriding objective of promoting long-term growth of the economy. Therefore, growth means an increase in economic activities.

Todaro (1995) citing Kuznets defined a country's economic growth as a long-term rise in capacity to supply increasingly diverse economic goods to its population, and this growth capacity is based on advancing technology and the institutional and ideological adjustment that it demands.

According to Timothy and Abomaye-Nimenibo (2019), economic growth means an increase in national income, which is an increase in the total output of goods and services of a nation. Increase in per capita income means that total output during a particular period must be rising than the rise in production.

Suleiman (2009) observes that the size of Government and its impact on economic growth has emerged as a major fiscal management issue facing economies in transition. He went on to say that previous researches have focused predominantly on size of government in industrialized countries, but given the openness of most developing countries (DCs), trade dependency, the vulnerability to external shocks, and volatility of finances, the role and size of government become germane to adjustment and stabilization programmes.

Mitchell (2005) has argued that a large and growing government is not conducive to better economic performance; while Abu and Abdullah (2010) observe that government expenditure has continued to rise due to the huge receipts from production and sales of crude oil, which brings about an increased demand for public goods like roads, communication, power, education and health. Besides, there is an increasing need to provide both internal and external security for the people and the nation. Available CBN statistical data show that total government expenditure (capital and recurrent) continued to rise throughout the period of that study.

The relationship between public expenditure and economic growth has continued to generate series of controversies among scholars, and the nature of its impact is inconclusive and while some authors such as Akpan, (2005) believed that the impact of government expenditure on economic growth is negative or non-significant, others like Korman and Brahmashrene, (2007) believed that the impact is positive and significant.



Aregbeyen (2007) established a positive and significant correlation between government capital and public investment and economic growth, but, that of current and consumption expenditures were negatively associated. Other studies also confirm either a negative or a positive correlation/relationship between fiscal policy (government expenditure, public investment or related variables used as proxies) and economic growth.

*Economic growth is seen in two perspectives:*

*b) Output Growth*

Economic growth is measured in quantitative terms of national income per head, output per worker, gross domestic product, etc. For example, in a situation where the salary per head of staff rises from say N250, 000.00 to N300, 000.00, we refer to such increase as an element of economic growth. Similarly, an increase in the total gross domestic product (GDP) is an indication of economic growth. However, this increase should not be taken to mean an increase in the welfare of the person since an increase in output or income per head may not necessarily improve the welfare of the people which will be termed as economic development.

Economic growth means the process whereby more goods and services are available to satisfy the needs of society. It also means the expansion of an economy's capability to produce the goods and services the citizenry want in a given period. The productive economy depends on the quantity and quality of resources as inputs as well as on the level of technological development of a nation.

Nigeria is an agro-based country which predominant occupation is agriculture with its allied activities like farming, poultry, cattle rearing, fishing, animal husbandry, etc. which has in its employees according to recent statistics, about 23 per cent of the labour force in Nigeria. They are producing about 22 percent of the country's GDP (Gross Domestic Product).

However, due to defective planning and improper implementation of policies, the productivity of Nigeria's agriculture is very meagre compared to foreign countries. Low productivity was also attributable to improper land tenure, inadequate credit system, primitive technology which is still in vogue and old ways of cultivation and irrigation, urban migration, the quest for white collar jobs, etc. To overcome all these technical hitches, the government has adopted several measures, including land reforms, School to land, the green revolution; Operation feed the nation, etc. for the growth of per hectare agricultural production but the results are not still encouraging.

*c) Industrial Growth*

Irrespective of all the various developmental plans adopted by the Government of Nigeria in realizing industrialization has not to yield sufficient realization as

long as there is no lasting or enduring development of small and heavy industries such as steel and iron industry, cement industries and self generating power supply, etc. Even though businesses producing consumer goods are on the increase, the capital goods industries are not increasing at the same pace. Towards solving this problem, the government of Nigeria decided to privatize and commercialize the government own companies and also giving out licenses open-handedly to private sector investors to develop consumer goods industries along with few engineering goods companies. The government also resorted to reactivate and revamp small and medium scales industries such as industries producing defence ammunition, railway spare parts, rehabilitation of power and energy sector. Proper credit facilities and adequate subsidies with soft loans are also being provided to industrialists to increase their scale of production.

Even though there has been slow growth in wholesale and retail trade, transportation, there has been tremendous growth in communication, financial intermediation, education, health, and social work sectors as well as in hotel and restaurants business.

Despite the reforms in the industrial sector, yet that of export and import businesses has been stifled, and domestic industries are finding it difficult to stand especially in the face of an embargo on the importation of raw materials (Abomaye-Nimenibo and Timothy, 2019).

*i. Economic Development*

Economic development refers to the system through which the welfare of the citizens of a nation is improved economically so that their present state of well-being should be better than their former state. It means developing the economic wealth of countries, regions or communities for the well-being of its citizenry with the view of improving the economic well-being and quality of life for the citizenry and creating jobs for them. Wellbeing of the people of a state within its geographical expanse. Economic development is a concept that is widely used every day.

It is also known as the process by which emerging economies become advanced economies whereby those nations with low living standards become nations with a high living standard. Economic development is akin to the overall improvement in health, socio-economic well-being, and academic level with a constant increase in income per capita, etc. (Abomaye-Nimenibo and Timothy, 2019).

*ii. Economic Growth versus Economic Development*

Human development is said to be a one-sided process, yet it remained the very goal of every society at all times. The term 'development' until recently meant growth measured by GNP or rise in per capita income. Yet development is not growth. Perhaps it could be

growth coupled with social justice according to Kayode and Oyeranti, (1999).

Pearce and Warlord (1993) defined economic developments as achieving a set of social goals, and those goals are bound to change over time through a process. An economy in the process of economic development is likely to experience a combination of three sets of changes: (a) an advance in utility; (b) a major factor contributing to advancement in wellbeing of a real income per capita, and (c) advances in the realms of education, health and general quality of life.

Goulet (2009) argued that economic development involves advances in skills, knowledge, capability and choice with Self-esteem and Self-respect. It is also independence from domination by others or at times from the state which is a major characteristic of an economy that can be said to be developed.

Lngham (1993) opined that development must be understood from two perspectives implying that changes lead to improvement or progress and that every economy that raises its per capita level of real income for a specific period without transforming its social and economic structure is unlikely to be perceived as developing.

Todaro (2011) perceived development in terms of the reduction or elimination of poverty, inequality and unemployment that is economic in character must involve a change in the composition of an economy's outputs and inputs.

### iii. Composition of economic growth

Public spending plays an important role in supporting economic growth. When public spending is at a lower level it means that fewer revenues are needed to achieve balanced budgets, which also means that lower taxes can be levied, therefore contributing to stimulate growth and employment. Public spending is a key variable that influences the sustainability of public finances via effects on fiscal balances and government debt. Moreover, better control of fiscal variables would eliminate or reduce the possibility of the fiscal policy itself being a source of macroeconomic volatility. If we accept that fiscal policy is in some cases driven by considerations which are not linked to macroeconomic stability, then there is the possibility that by limiting such actions the society will gain by having less economic volatility in terms of output and investment; leading to higher economic growth. Generally speaking, authorities would like to redirect public expenditure towards increasing the importance of capital accumulation – both physical and human as well as support such areas as research, development, and innovation.

To understand how to restrict fiscal policy volatility and check government size, it is particularly important to understand which components of government revenue and spending are most detrimental to growth. The channel, through which fiscal policy

affects growth when understood properly, will enable the authorities of government to redirect public spending and revenue properly and control other components which are limited. We, therefore, provide some answers to this composition issue and address the effects of both government size and fiscal policy volatility on economic growth using the volatility of the cyclical components of the budgetary variables.

### iv. Government expenditure

The rising trend between government spending and economic growth have called for different arguments among scholars and policymakers. There are two basic roles government play in an economy and they are maintenance of law and order (i.e. making and enforcing these laws and orders passed), which is the protection of lives and properties of the nation as well as providing public goods such as good roads, education, health, defence, power and so on (Abomaye- Nimenibo, 2019). Protection function consists of the creation of the rule of law and the enforcement of property rights. This helps to minimize risks of criminality, protect life and property, and the nation from external aggression; while the provisions of public goods are defence, roads, education, health, and power, just to mention but a few. Some scholars argue that an increase in government expenditure on socio-economic and physical infrastructures encourages economic growth. For example, government expenditure on health and education raises the productivity of labour and increase the growth of national output. Similarly, expenditure on infrastructure such as roads, communications, power, etc., reduces production costs, increases private sector investment and profitability of firms, thus fostering economic growth. Supporting this view, Ranjan and Sharma (2008) and Cooray (2009) concluded an experiment where the expansion of government expenditure was found to have contributed positively to economic growth.

Scholars have argued over time that increase in government expenditure on socio-economic and physical infrastructure fosters economic growth. For example, expenditure on education and health raises the level of national output through improved quality of labour and productivity. Similarly, spending on infrastructure such as roads, communications, power and so on reduces production costs and increase the profitability of firms, thus fostering economic growth. Series of arguments and studies have emerged on the platform saying that an increase in government spending does not promote growth and development, rather reduce the overall performance of the economy. Buttressing this argument is the fact that an increase in government spending may result from an increase in taxes or borrowing. This is so when higher taxes are imposed, individuals get discouraged because income is reduced and the number of hours they worked also



reduces. On the side of the coin, higher profit tax increases production cost and reduces investment expenditure as well as profitability. If the government in a different dimension resort to borrowing to finance projects rather than raising taxes, then private sector investment will reduce and growth will also be deterred. In Nigeria, government expenditure has always been on the increase due to the inflow of revenue as a result of an increase in the flow of revenue from production and sales of crude oil. This is however accompanied by a huge demand for public goods such as roads, electricity, and education, and health, external and internal security etc. With this context, statistics has it that government capital and recurrent expenditure have continued to rise in the last forty (40) years or so.

Despite the huge government expenditure, the economy of Nigeria has not been translated into reasonable growth and development. This is true as the country is still ranked as one of the poorest in the world. In the last few years, her balance of payment, inflation and exchange rates, national savings and other macroeconomic indicators have not been behaving healthily. This is depicted by the fact that there has been serious winding up of many industries partly because of a breakdown in infrastructure or as a result of the high rate of unemployment.

However, some scholars did not support the claim that increasing government expenditure promotes economic growth, they rather assert that higher government expenditure may slow down the overall performance of the economy. For instance, in an attempt to finance rising expenditure, the government may increase rates of taxes and/or borrowing. Higher-income tax discourages individuals from working for long hours or even searching for jobs, which in turn reduces income and aggregate demand. On the other hand, higher profit tax tends to increase production costs and reduce investment expenditure as well as the profitability of firms. If the government increases borrowing especially from the banks to finance its expenditure, private sector investment will be low. Furthermore, in a bid to score cheap popularity and ensure that they continue to remain in power, politicians and government officials sometimes increase expenditure and investment in unproductive projects or in producing goods that the private sector can produce more efficiently. Studies by Laudau (1986), Barro (1991), and Henrekson (2001) suggested that large government expenditure harms economic growth.

#### v. Composition of government expenditure

The composition of public government expenditure has been attracting the attention of economists in recent times due to its effects on the level of growth. Government expenditure is expected to be the means of reducing the negative impacts of market failure on the economy. Nevertheless, allocations of

public expenditure with a lack of consideration for the urgent needs of the country may engender greater distortion in the economy which may be detrimental to growth. Hence, from 1960, it has become a yearly procedural for the government to allocate public expenditure into various sectors of the economy. However, the impact of the composition of public expenditure on the level of growth is not felt. If government allocations to the various sectors are determined by political consideration rather than economic reasons, market distortion will be aggravated with an increase in government expenditure. Where the problem of rent-seeking is rampant, public spending compositions will be disproportionately shifted based on rent-seeking for personal benefits rather than achieving rapid economic growth. Are the compositions of public expenditure growth-enhancing or growth retarding in Nigeria? Is there any need for the composition of government expenditure to be adjusted to accelerate rapid economic growth? Earlier research in this area in Nigeria has been to investigate the impacts government investments on variables like manufacturing performance and employments (Adenikinju; 1998 & Hossein; 1998).

In the same manner, the composition of government recurrent expenditure shows that expenditure on general administration, defence, internal security, education, health, drinking water, local development, agriculture, construction, and transport and communication increased during the period under review. Moreover, government capital expenditure rises considerably yearly in Nigeria. Furthermore, the various components of capital expenditure (that is, economic service, social service, defence, agriculture, transport and communication, education and health) also show a rising trend between 2000 and 2012 as can be averred in the yearly budget. Before the endogenous growth theory, as proposed by Barrow (1991), no significant relationship was predicted to exist between economic growth and public expenditure. In fact, in the Solow growth model (1956) public expenditure is only related to the equilibrium factor ratios and it is assumed that public investment is not related to long-run economic growth in the neoclassical perspective. However, the recent argument in favour of the significant relationship between long-run economic growth and public expenditure rests on the inclusion of fiscal policies into the endogenous growth model with the conclusion that public spending can affect the long-run economic growth (Barro and sala-Martin, 1992). Government consumption expenditure is assumed to be negatively related to long-run growth while public investment expenditure is predicted to be positively related to long-run growth. Barro (1990) further argued that government consumption expenditure connotes leakages in the production process due to its non-entrance into the

private production functions as well as its negative relationship with returns on private investment which invariably poses discouragement to investors.

However, public policies can be used to enhance the efficient allocation of the resource by correcting market failure and thus encourage higher human and physical capital productivity. Productive public expenditure is expected to boost the steady-state growth rate but this argument depends on the composition of the public expenditure. Consequently, the trade-off between consumption and productive public expenditure will ultimately determine the effects of government expenditure on the long-run economic growth, (Kneller, Bleaney, and Gemmell; 1999). Therefore, while the neoclassical models assumed transitory public expenditure effects on economic growth the endogenous model predicts permanent steady-state growth effects of public expenditure.

Theoretical positions on the relationship between the composition of government expenditure and economic growth unlike many other theories originated from empirical findings. The explosion of empirical studies on the endogenous models led to the division of public expenditure into productive and consumption items. (Landau, 1983; Aschauer, 1989; Barro's 1990, 1991) The productive expenditure is assumed to be positively correlated with economic growth while the consumption expenditure is assumed to be negatively related to growth. The most comprehensive theoretical model is that of Devarajan, Swaroop and Heng-fu-Zou (1996) in which the conditions under which a change in the composition of public expenditure could enhance the higher steady-state growth rate of the economy was derived. They concluded that the generally assumed productive expenditure could become unproductive if the amount allocated to them is excessive. However, there is no consensus yet in the literature about which public expenditure is productive or unproductive (Musgrave, 1997).

#### vi. *The History of Public Expenditure in Nigeria*

Adebayo (1969) reconnoitred Nigeria's public expenditure management between 1946 and 1966 and identified four stages of its evolution that is – from 1946 to 1952 being an era of three regions with two sources of revenue, namely: regional taxes and federal block grant, with expenditure guided purely by the derivation principle; and the second from 1952 to 1954 (an era when regions were given independent tax jurisdiction, with the statutory share of federal revenue, whereas need, national interest and revenue derivation principle were the primary indices for sharing or expending the revenue).

The third phase was 1954 to 1959 when the North and West aligned to reintroduce revenue derivation principle as the only expenditure determinant;

while the final phase was from 1959 to 1966, necessitating the discovery of oil in the East and the consequent abrogation of derivation as the only determinant factor. The fourth phase was characterized by the absence of the fiscal adjustment process, lack of effective coordination of producer price policy in the regions and their harmonization with the national monetary and fiscal policies.

Adebayo therefore, observed that the Nigerian fiscal system evolved and operated on the principle that negated the main features of public expenditure management, which include among others:

- i. Allocation,
- ii. Efficiency and
- iii. Equity guided by the principle of needs, equity, stability and national interest (Ademolekun, 1983).

This feature has greatly hampered the effective development-oriented fiscal system and was rather an instrument of national conflict. Ademolekun (1983) on his part noted that Nigeria's public expenditure management has been reformed since 1960 passing through many stages whereby in 1960 to 1979 the Minister of Finance was the leader of the budgetary process and chairman of the Treasury Board.

Between 1979 and 2005 the office of the director of the budget was equally established as the expert responsible for the budgetary process under the direct control of the president of Nigeria directing the budgetary process, and he is also the chairman of the Treasury Board.

Jaja (2000) in his evolutionary study of Nigeria from 1900 to 1950 identified a change or shift from colonially controlled and dictated fiscal management system to a centralized system of budgeting and subsequent decentralization. Jaja identified 1900 to 1906 as a period of classical budgetary practices, which revolved around development plans, short term financing policies, objectives and strategies for the several units which later became Nigeria. The period 1907 to 1950 experienced a change to a central budgetary control through the establishment of a small central development board. However, in 1954/55, decentralized Public Expenditure Management (PEM) aimed at solving the problems of the regions were introduced being inflexibility, inappropriate coordination of budgetary process and proliferation of offices responsible for budgeting, non-professionalization of the system and government disregard for fiscal regulation, as the problem confronting Public Expenditure Management as at then (Jaja, 2000).

Generally, Ukwu et al. (2003) summarized the weaknesses of Public Expenditure Management (PEM) in Nigeria as:

- i. Lack of rigour at the bureaucratic level.
- ii. Lack of clear vision and functional cooperation at the political level.

- iii. Very little involvement of the civil society, except for formalistic consultation of or with the organized private sector, in the entire planning process.
- iv. Ill-equipped and inefficient bureaucratic.

ADI (2005) noted that Nigeria's PEM is structured after oil income such that in periods of boom, expenditure is ratcheted up while periods of lower oil prices become one of crisis, inefficiency in resource use, waste and misplaced priorities in government expenditure, high fiscal federal structure that places little or no premium on inter-temporal fiscal solvency, and poor institutional mechanism for regulating actions of the debt burden, huge recurrent expenditure furniture burdens, inefficient delivery of services and distortion in the incentive structure for both the private and public sectors. There have also been traces of seeming lack of political will and commitment to abide by stipulated rules and budgetary guidelines, inability to develop a macro-economic framework for budget formation, role obscurities among various government agencies concerned with PEM, lack of coordination between the office of the Accountant General of the Federation (AGF) and the Central Bank of Nigeria (CBN), slow budget process fraught with errors, among other things (Akinyene, 1981; Ukwu et al., 2003).

UNCTAD (2003) on its part noted that Nigeria has pursued a long term expenditure management framework. While Gowon and Obasanjo's regimes pursued nine years' development plans, the Babangida administration embarked on ten years SAP programme, and the Abacha administration pursuit was a fifteen-year vision 2010 programme.

#### *d) Growth Theories*

Economic growth theory deals with the long-run growth trend of the economy, or potential growth path (Branson, 2012). The focus is on factors that lead to economic growth over time and analysis of the forces that allow some economies to grow rapidly, some slowly and others not at all. Early growth theories emphasized different aspects of the economy.

While the Mercantilists emphasized a surplus balance of trade, the Physiocrats emphasized agriculture as the source of all wealth while the Camera lists favoured taxation and state regulation for a strong economy (Lombardi, 2011). Within the framework of the classical models of Smith and Malthus, economic growth is described in terms of fixed land and growing population. But without technological change, the increasing population eventually exhausts the supply of free land and triggers the law of diminishing returns which results in declining real wage down to subsistence level at which point Malthusian equilibrium is obtained.

The Keynesians see demand as a prerequisite for growth. Therefore, their analysis concludes that aggregate demand management policies can and should be used to improve economic performance. In the Keynesian model, an increase in government expenditure especially on infrastructures leads to higher economic growth.

The Neo-classical growth models contend that government fiscal policy does not have any effect on the growth of national output. However, it has been argued that government fiscal policy (interventionism) helps to improve failure that might arise from the inefficiencies of the market.

In exploring the Keynesian framework, Harrod-Dommar model pointed out some dynamics of growth which determines the equilibrium growth rate in the economy, maintaining the balance between supply and demand for a country's output. On the supply side effect, savings is a function of the level of GDP while investment is an important component of the demand for the output of an economy as well as the increase in capital stock. Therefore, the equilibrium rate of growth is given by matching proportionate change in output with the ratio of savings-output to that of capital-output. This sustains the economy along some warranted a steady growth path.

Therefore, temporary deviations from the warranted growth path would not be self-correcting, because of the lack of self-correcting forces within the dynamics of the model. It is to be characterized by 'knife-edge instability' i. e. market-regulated growth espoused by the model is unstable and, thus, necessitates government intervention.

#### *e) Empirical Literature*

A good number of studies have been carried out focusing on the relationship between government expenditure and economic growth in developed and developing countries like Nigeria. The results varied from one study to another. Alexander (1990) applied the OLS method for a sample of 13 Organization for Economic Cooperation and Development (OECD) countries during the period ranging from 1959 to 1984. The results revealed among others that, government spending has a significant negative impact on economic growth.

Gregarious and Ghosh (2007) made use of the heterogeneous panel data to study the impact of government expenditure on economic growth and their results revealed that countries with large government expenditure tend to experience higher economic growth than others with less government expenditure.

Devarajan and Vinay (1993) used panel data for 14 developed countries for a period ranging from 1970 to 1990 and applied the Ordinary Least Square statistics on 5-years moving average. They took various functional types of expenditure (health, education, transport,

communication, and Defence.) as explanatory variables and found that health, transport and communication have significant positive effect economic growth, while education and defence harm economic growth.

Using panels of annual and period-averaged data for 22 Organizations for OECD countries during 1970 to 1995, Blarney et al (2001) studied the impact of government spending on economic growth applying OLS and GLS methods, and they found that productive public expenditures enhance economic growth, but non-productive public spending does not. Their result was in line with the predictions of Barro (1990) model.

Gemmell and Kneller (2001) provided empirical evidence on the impact of fiscal policy on long-run growth for the European economy. Their study required that at least two of the taxation, expenditure and deficit effects have to be examined simultaneously. They employed panel and time series econometric techniques, on the endogeneity of fiscal policy. Their results indicated that while some public investment spending impacts positively on economic growth, consumption and social security spending have zero or negative growth effects on economic growth.

Mitchell (2005) evaluated the impact of government spending on economic performance in developed countries. He assessed the international evidence, and reviewed the latest academic research, cited examples of countries that have significantly reduced government spending as a share of national output and went on to analyse the economic consequences of these reforms. Regardless of the method of study or model employed, he concluded that a large and growing government is not conducive to better economic performance. He further argued that reducing the size of government expenditure would lead to higher incomes and improve America's competitiveness.

Olorunfemi, (2008) studied the direction and strength of the relationship between public investment and economic growth in Nigeria. He used time-series data from 1975 to 2004 and observed that public expenditure impacted positively on economic growth and that there was no link between gross fixed capital formation and Gross Domestic Product. He averred that from disaggregated analysis, the result reveals that only 37.1% of government expenditure is devoted to capital expenditure while 62.9% share is to recurrent expenditure.

Olepade and Olepade (2010) study centres on how fiscal and monetary policies influence economic growth and development. The essence of their study was to determine the components of government expenditure that enhance growth and development, and also identify those variables or components that do not enhance economic growth and development and recommend those that should be cut off or reduce the amount of government spending on them to the barest

minimum. The study employs an analytic framework based on economic models, statistical methods encompassing trends of analysis and simple regression. They find no significant relationship between most of the components of government expenditure and economic growth in Nigeria from the period ranging from 1970 to 2008. They used disaggregated analysis in an attempt to unravel the impact of government expenditure on economic growth. Their results revealed that government total capital expenditure and total recurrent expenditure on Education have a negative effect on economic growth; and on the contrary, an increase in economic growth. They recommend that the government should increase both capital expenditure and recurrent expenditure including expenditure on education as well as ensure that funds meant for development on these sectors are properly utilized. They also recommend that the government should encourage and increase the funding of anti-corruption agencies to tackle the high level of corruption found in public offices in Nigeria.

#### f) *Summary of Reviewed Literature*

Eminent scholars such as Alexander (1990) applied OLS method for a sample of 13 organizations for economic cooperation and Development (OECD) countries panel during the period ranging from 1959 to 1984; and his result revealed among others that, government spending has a significant negative impact on economic growth. Gregarious and Ghosh (2007) made use of the heterogeneous panel data to study the impact of government expenditure on economic growth for a period ranging from 1970 to 1990, applied the Ordinary Least Square method on 5-years moving averages. They took various functional types of expenditure (health, education, transport, communication and defence) as explanatory variables and found that health, transport and communication have a significant positive effect while education and defence do not impact on economic growth. We also see Bleaney et al (2001) who also studied the impact of government spending on economic growth; Gemmell and Kneller (2001) provide empirical evidence on the impact of fiscal policy on long-run growth for the European economy. Mitchell (2005) evaluated the impact of government spending on economic performance in developed countries. Olorunfemi, (2008) studied the direction and strength of the relationship between public investment and economic growth in Nigeria, using time series data from 1975 to 2004 and observed that public expenditure impacted positively on economic growth and that there was no link between gross fixed capital formation and gross domestic product, etc. However, none of these researchers covers the period 1985-2015 which call for this research work.



### III. METHOD OF STUDY

Here, we outline the procedures that were adopted to realize the research objectives, including the overall design of the study, data collection and the techniques of data analysis.

#### a) Research Design

Onwumere (2005), states that a research design is a kind of blueprint that guides the researcher in his or her investigation and analyses. The research design we adopted for this research is the ex-post factor research design. The adoption hinges on the reasons that, the study relied heavily on historical data obtained from the Central bank of Nigeria statistical bulletin from 1985 – 2016, revealing that the even understudy has already taken and therefore does not give room for control or manipulation of the independent variables. The inability of the researcher to manipulate the independent variables is a basic feature of ex post facto research design; and secondly, this type of research design calls forth causal-comparative research which is used when the researcher intends to determine the cause-effect relationship between the independent and dependent variables to establish a causal link between them.

#### b) Model Specification

The model specification is functionally expressed as:

$$GDP = f(CAPEX, RECEX, \dots) \quad (1)$$

The operational form of the model is:

$$\text{LOG (GDP)} = b_0 + b_1 \text{LOG (CAPEX)} + b_2 \text{LOG (RECEX)} + U \quad (2)$$

GDP = Gross Domestic Product

CAPEX = Government capital expenditure

RECEX = Government recurrent expenditure

$b_0$  = Intercept

$b_1 - b_2$  = Coefficients of the independent variables

U = Error term

The Apriori expectation is stated as

$$b_1 > 0, b_2 > 0,$$

#### c) Data Required

The data required for this study is that of annual time series which were collected from secondary sources Central Bank of Nigeria (CBN) statistical bulletin, ranging from 1985 to 2016.

#### d) Method Of Data Analysis

We use the multiple regression analysis of the ordinary least square (OLS) employing the estimation technique to determine the impact of government spending on the economic growth in Nigeria; using the Econometric software called E-views 3.1 in analyzing the data.

#### e) Diagnostic Test

The following diagnostic tests were conducted as follows:

*Unit root test:* The time series properties of data employed in the estimation equation was tested for stationery using Augmented Dickey-Fuller (ADF) unit root test to avoid the problem of spurious regression.

*Co-integration test:* To investigate whether there is the existence of a long-run relationship among the variables in the estimation, the Johansen test for co integration was employed.

*Error Correction Method:* This test was conducted to determine the speed of adjustment from short-run equilibrium to long-run equilibrium.

*Coefficient of multiple determinations (R<sup>2</sup>):* We carried the test to ascertain the adjusted (R<sup>2</sup>) to test the goodness of fit which shows the percentage of the total variation of the dependent variable that can be explained by the independent variable. The value of R<sup>2</sup> lies between 0 and 1, and the closer R<sup>2</sup> is to 1, the better the goodness of fit, while the closer R<sup>2</sup> is to 0, the weaker or worse the goodness of fit is.

*T-test:* This was used to test the statistical significance of the individual regression coefficient. When this was done, the computed or calculated value (cal) was compared with the theoretical/tabulated value (tab) with the n-k degrees of freedom. The acceptance or rejection of the null hypothesis has a definite economic meaning and implication, whereby the acceptance of null hypothesis  $b_i = 0$  implies that the explanatory variable to which this estimation of the variable was done does not influence the dependent variable and should not be included in the function.

*The essence of F-Test* was to determine whether the individual estimated parameters (independent variables) were statistically significant or not. It allows the t-distribution at 5% level of significance. If the computed F-value is greater than the tabulated F-value, we reject the null hypothesis and accept the alternate hypothesis showing that the overall model is statistically significant.

*Durbin-Watson statistic* was used to test whether autocorrelation is present in the model or not.

### IV. DATA PRESENTATION AND ANALYSIS OF RESULT

The results got from data analyses and the result presented and interpreted accordingly. The Unit Root Test was carried out to analyse data and was followed by the estimation of the regression equation.

#### a) Unit Root Test

We test the variables for stationarity using the Augmented Dickey-Fuller (ADF) technique

Table 4.1: Unit Root Test Result

VARIABLES	ADF STATISTIC	5% CRITICAL LEVEL	ORDER OF INTEGRATION
GDP	-3.059393	-2.9750	1(2)
RECEX	-7.313748	-3.5731	1(1)
CAPEX	-3.487046	-2.9705	1(1)

The unit root test result from table 4.1 showed that all the variables (TEXP, RECEX and CAPEX) are stationary at first difference except GDP which is

stationary at the second difference. This is so because their various ADF statistic values are greater than the 5 per cent critical values in absolute terms.

Table 4.2: Co integration Test Result

Date: 08/23/19 Time: 14:14

Sample: 1985 2015

Included observations: 29

Test

assumption:

Linear

deterministi

c trend in

the data

Series: GDP RECEX CAPEX

Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Per cent	1 Per cent	Hypothesized
		Critical Value	Critical Value	No. of CE(s)
0.798665	77.63853	29.68	35.65	None **
0.554454	31.15777	15.41	20.04	At most 1 **
0.233524	7.712591	3.76	6.65	At most 2 **

L. R Test indicates 3 coin integrating equation(s) at 5% significant level. This suggests that the variables in the model (GDP, RECEX and CAPEX) have a long run relationship.

Table 4.3: Regression Result

Dependent Variable: LOG(GDP)

Method: Least Squares

Date: 08/23/19 Time: 14:17

Sample: 1985 2015

Included observations: 31

Variable	Coefficie nt	Std. Error	t-Statistic	Prob.
C	2.802672	0.145332	19.28459	0.0000
LOG(CAPEX)	0.223007	0.099104	2.250240	0.0325
LOG(RECEX)	0.822257	0.085253	9.644882	0.0000
R-squared	0.985427	Mean var	dependent	8.681600

Adjusted squared	R- 0.984386	S.D. dependent var	2.033611
S.E. of regression	0.254109	Akaike info criterion	0.189656
Sum squared resid	1.807993	Schwarz criterion	0.328429
Log-likelihood	0.060335	F-statistic	946.7009
Durbin-Watson stat	0.884350	Prob(F-statistic)	0.000000

The results as presented in Table 4.3 showed that R-squared value is 0.985427 which implies that about 98.54 per cent of the total variation in economic growth (GDP) within the period under study was explained by changes in government capital expenditure (CAPEX) and recurrent government expenditure (RECEX). The F-statistic of 946.7009 with the corresponding probability value of 0.0000 measured the adequacy of the regression model and the overall influence of CAPEX and RECEX on GDP. However, the probability value of the F-statistic is less than 0.05, revealing that the model has a good fit and the explanatory variables jointly exerted a statistically significant effect on the dependent variable (GDP). The Durbin-Watson statistics of 0.884350 shows that there was the presence of serial correlation among the variables. The coefficient of the constant term stood at 2.802672 which implied that if all the explanatory variables (CAPEX and RECEX) are held constant, GDP will remain at 2.802672 units. The coefficient of

government capital expenditure (CAPEX) was 0.223007 while the t-value is 2.250240 with the probability value of 0.0325. This shows that if all other explanatory variables in the model are held constant, a percentage increase in government capital expenditure will cause a positive and significant effect on economic growth by 0.223007 units. The coefficient of recurrent government expenditure (RECEX) was 0.822257 with t-value of 9.644882 and probability value of 0.0000 which implies that if all other variables in the model are held constant, a percentage increase in government recurrent expenditure (RECEX) will cause a positive and significant effect on GDP by 0.822257 units.

This result leads to the rejection of the first and second null hypotheses which says that there is no significant relationship between government capital expenditure and economic growth in Nigeria and also, that there is no significant relationship between government recurrent expenditure and economic growth of Nigeria.

Table 4.4: Error Correction Model

Dependent Variable: DLOG (GDP)  
Method: Least Squares  
Date: 08/23/19 Time: 14:20  
Sample (adjusted): 1986 2015  
Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.161352	0.021652	7.452074	0.0000
DLOG(CAPEX)	0.097281	0.053137	1.830761	0.0786
DLOG(RECEX)	0.122566	0.057534	2.130345	0.0428
ECM(-1)	-0.277891	0.066183	-4.198836	0.0003
R-squared	0.446787	Mean dependent var		0.206456
Adjusted squared	R- 0.382955	S.D. dependent var		0.104968
S.E. regression	of 0.082454	Akaike info criterion		-2.029576
Sum resid	squared 0.176767	Schwarz criterion		-1.842750

Log-likelihood	34.44365	F-statistic	6.999387
Durbin-Watson	1.812494	Prob(F-statistic)	0.001326

In this result, the error correction term appeared with statistically significant coefficient with the appropriate negative signs as is required for dynamic stability. The value of the coefficient of the error correction term is 0.277891 showing that the speed of adjustment from short-run equilibrium to long-run equilibrium is 27.79%. All the variables are statistically significant except government capital expenditure (CAPEX). The value of the R<sup>2</sup> which is 0.446787 showing that about 44.68% variation in the dependent variable (GDP) were explained by changes in the explanatory variables (CAPEX and RECEX), and since the probability value of the F-statistic is less than 0.05, the model was a good fit and the explanatory variables jointly exerted a statistically significant effect on the dependent variable (GDP). The Durbin-Watson value of 1.812494 shows weak autocorrelation.

## V. SUMMARY, CONCLUSION AND RECOMMENDATION

### a) Summary

The study examines the impact of government expenditure on the economic growth of Nigeria within the period 1985 - 2015. In our introduction, a comprehensive background statement to the study was given, stating the identified problems as well as the objectives of the study. The research hypotheses were also stated as well as the significance of the study. We also reviewed the various theories associated with our study and that of empirical study as well as stating our model for the analysis and the variables with the sources and methods of data analysis. We adopted the Ordinary Least Squares method of estimation, as well as stating our analysis of results, our discussions on findings. We, therefore, make a summary of major findings and present our recommendations drawing inferences from our study to proffer necessary solutions or policy statements for policymaking.

## VI. SUMMARY OF MAJOR FINDINGS

Our major findings include:

- i. Government capital expenditure has a positive and significant impact on economic growth in Nigeria, implying that an increase or decrease in government capital expenditure will have a significant impact on the economic growth of Nigeria at least for the period under study.
- ii. Government recurrent expenditure has a positive and significant impact on economic growth in Nigeria, which invariably means that an increase or decrease in government recurrent expenditure will have a significant impact on the economic

growth of Nigeria at least for the period under study

### a) Conclusion

Based on major findings, the study concludes that the government's recurrent and capital expenditures have a significant impact on the economic growth of Nigeria.

### b) Recommendations

Given our findings, the following recommendations are made:

- i. The government should increase its capital expenditure by way of increasing its investment on the health sector, education sector, and agricultural sector, as well as construction of roads and bridges and provisions of better telecommunication services.
- ii. The government should also increase its recurrent expenditure on salaries, transfer payments and welfare services to enable the population to go into the production of goods and services.
- iii. While embarking on expenditure, the government should instill fiscal discipline in her expending by initiating far-reaching effective internal control measures and discourage all expenditures on non-productive activities and investments at all tiers of governments.
- iv. The independent corrupt practices commission and other related crimes commission should be reformed and modernized to ensure transparency in all government spending.
- v. That the CBN's Monetary and Fiscal policies should advocate a lower interest rate to encourage investors to borrow for investment in the production of good and services.
- vi. That, monetary authorities and the government to maintain a stable exchange rate to encourage investment both at home and abroad.
- vii. The government should give more attention to human capital development.

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## APPENDIX: 1

Nigeria's Data on RECEX, CAPEX and GDP

YEAR	RECEX	CAPEX	GDP
1985	7.58	5.46	192.27
1986	7.7	8.53	202.44
1987	15.65	6.37	249.44
1988	19.41	8.34	320.33
1989	25.99	15.03	419.2
1990	36.22	24.05	499.68
1991	38.24	28.34	596.04
1992	53.03	39.74	909.8
1993	136.73	54.5	1259.07
1994	89.97	70.92	1762.81
1995	127.63	121.14	2895.2
1996	124.49	212.93	3779.13
1997	158.56	269.65	4111.64
1998	178.1	309.02	4588.99
1999	449.66	309.02	5307.36
2000	461.6	239.45	6897.48
2001	579.3	438.7	8134.14
2002	696.8	321.38	11332.25
2003	948.3	241.69	13301.56
2004	1110.64	351.25	17321.3
2005	1321.23	519.47	22269.98
2006	1390.1	552.39	28662.47
2007	1589.27	759.32	32995.38
2008	2117.36	960.89	39157.88
2009	2127.97	1152.8	44285.56
2010	3109.38	883.87	54612.26
2011	3314.57	918.55	62980.4
2012	3325.16	874.83	71713.94
2013	3689.6	1108.39	80092.56
2014	3426.9	783.12	89043.62
2015	3831.95	818.37	94144.96

Source: CBN Statistical Bulletin

**APPENDIX 2**  
Unit Root Result

VARIABLES	ADF STATISTIC	5% CRITICAL LEVEL	ORDER OF INTEGRATION
GDP	-3.059393	-2.9750	1(2)
RECEX	-7.313748	-3.5731	1(1)
CAPEX	-3.487046	-2.9705	1(1)

**APPENDIX 3**  
Co integration Test Result

Date: 08/23/19 Time: 14:23

Sample: 1985 2015

Included observations: 29

Test

assumption:

Linear  
deterministic  
trend in the  
data

Series: GDP RECEX CAPEX

Lags interval: 1 to 1

Eigenvalue	Likelihood	5 Per cent	1 Per cent	Hypothesized
	Ratio	Critical	Critical	No. of CE(s)
		Value	Value	
0.798665	77.63853	29.68	35.65	None **
0.554454	31.15777	15.41	20.04	At most 1 **
0.233524	7.712591	3.76	6.65	At most 2 **

**APPENDIX 4**  
Regression Result

Dependent Variable: LOG (GDP)

Method: Least Squares

Date: 08/23/19 Time: 16:24

Sample: 1985 2015

Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.802672	0.145332	19.28459	0.0000
LOG(CAPEX)	0.223007	0.099104	2.250240	0.0325
LOG(RECEX)	0.822257	0.085253	9.644882	0.0000
R-squared	0.985427	Mean dependent var		8.681600
Adjusted R-squared	0.984386	S.D. dependent var		2.033611
S.E. of regression	0.254109	Akaike info criterion		0.189656
Sum squared resid.	1.807993	Schwarz criterion		0.328429
Log-likelihood	0.060335	F-statistic		946.7009
Durbin-Watson stat	0.884350	Prob(F-statistic)		0.000000