



PUBLIC EXPENDITURE ON ECONOMIC GROWTH IN NIGERIA

IBEKWE ANTHONY IKECHUKWU

Lecturer, Department of Business Administration
Chukwuemeka Odumegwu Ojukwu University, Nigeria

ONUORAH, A. N.

Lecturer, Department of Business Administration
Chukwuemeka Odumegwu Ojukwu University, Nigeria

OKEKE M.N

Lecturer, Department of Business Administration
Chukwuemeka Odumegwu Ojukwu University, Nigeria

Abstract

The study investigated the effect of public expenditure on economic growth in Nigeria. The variables of Capital Expenditure on road, capital expenditure on agriculture, recurrent expenditure were regressed on the economic growth in Nigeria over the period of 1985 to 2015. Econometric techniques, including ADF and PP for unit root tests, Johansson co-integration for long run relationship and ordinary least square (OLS). The result indicates that positive relationship exists between capital expenditure on road, capital expenditure on agriculture and economic growth. While negative relationship exists between the recurrent expenditure and economic growth. Finally, the coefficient of Adjusted R-squared is 0.898550 which is approximately 90%. This means that 90% of total variations in the value of GDP can be explained by changes in the values of the independent variables while the remaining 9% is due to other stochastic variables. The study thus concludes that public expenditure has positive effect on economic growth of Nigeria and has helped to improve Nigeria's economic growth. Among the recommendations is that the Nigeria government should commit her public expenditure on priority projects that are capable of generating income that will not only produce servicing platform but will also improve the economic growth in Nigeria.

Keywords: Public Expenditure, Economic Growth.

1.1 Introduction

The volume of public expenditure has been on increase in Nigeria if not almost all countries of the world, because of the continuous expansion in the activities of the state and other public bodies on several fronts. Over the years the developments of the functions of the state in social matters such as education, public health, commercial and industrial undertakings has increased public expenditure to a large extent. Economic growth is fundamental although not a sufficient condition for sustainable development. Economic growth and development is mainly enhanced by the expansion of infrastructural facilities, the improvement of education and health service, the encouragement of foreign local investments, low cost housing, environmental restoration, and the strengthening of the agricultural sector. The approach consists of simulating the economy by addressing the nations forecast needs. Dealing with these issues will result in a great amount of money spending by the government and certainly lead to increased public

expenditure. Public expenditure is claimed as “the most powerful economic agent in all modern societies“(Arrow and kurz, 1970).

The size and structure of public expenditure will determine the pattern and form of growth in output of the economy. The structure of Nigerian public expenditure can be broadly categorized into capital and recurrent expenditure. Recurrent expenditure is referred to as government expenses on administration such as wages, salaries, interest on loans maintenance etc. whereas expenses on capital project like roads, airports, education, telecommunication and electricity generation etc., are referred to as capital expenditures. Public expenditure in Nigeria can also be categorized into exhaustive expenditure and transfer expenditure. Exhaustive expenditure is incurred when government actually consumes and makes purchases of factor inputs while transfer expenditure does not involve purchases of factor inputs by the government. One of the main purposes of government spending is to provide infrastructural facilities and the provision and maintenance of these facilities require a substantial amount of spending. Expenditure on infrastructural investment and productive activities (in state owned enterprises) ought to contribute positively to growth, whereas government consumption spending is anticipated to be growth retarding). However, economies in transition do spend heavily on physical infrastructure to improve the economic welfare of the people and facilitate the production of goods and services across all sectors of the economy so as to stimulate rapid growth in aggregate output. If government spending is used to finance investment in roads, education, health, agriculture and other areas, these investments will have direct social and economic beneficial effects on the country.

Furthermore, by providing new opportunities and expanding the capabilities of the masses, government spending plays an important role in ensuring sustainable economic growth(Josaphat and Oliver, 2000).The relationship between public expenditure and economic growth is especially important for developing countries, like Nigeria, most of which have experienced increasing level of public expenditure over time (Lindauer and Valenchik, 1992). This tends to be associated with rising fiscal deficits, suggesting their limited ability to raise sufficient revenue to finance higher levels of government expenditure. These rising deficits tend to have had adverse effects on growth in OECD countries. While numerous studies have been conducted, no consistent evidence exists for a significance relationship between public spending and economic growth, in a positive or a negative direction. Results and evidence differ by countries/region, analytical method employed, and categorization of public expenditures. This study aims at examining the relationship between public expenditure and economic growth in Nigeria.

1.2 Statement of Problem

Different researchers have investigated the effect of public expenditure on economic growth in Nigeria and have produced conflicting results and findings in respects of variables and methods of analysis.

Mutiu & Olusijibomi(2013) examines the relationship between public expenditure and economic growth in Nigeria during the period 1970-2009. A disaggregated public expenditure level was employed using the Gregory-Hansen structural breaks cointegration technique. The result shows that public expenditure has positive effect on economic growth in Nigeria

Chris & Oyingaga (2015) investigated the effect of public expenditure on the growth and development of Nigerian economy between 1980 to 2012, Data gathered were analyzed using Ordinary least square, multiple regression statistical technique. The Result of their findings revealed that aggregate expenditure had a positive impact on economic growth and development of the Nigerian economy, recurrent expenditure had a significant relationship on the growth and development of the Nigerian economy. The result also indicated that capital expenditure also had a significant effect on the growth and development of the Nigerian economy.

However, In contrast to all these positive results and conclusions in findings,

Abu and Abdullahi (2010) in their short-run analysis of recurrent and capital expenditures, as well as government spending on agriculture, education, defense, health and transport communication sectors of the Nigerian economy obtained results that revealed that government total capital expenditure, total recurrent expenditure have negative effects on economic growth In Nigeria within the period under review.

Nworji, Okwu and Obiwuru (2012) examined the effect of public expenditure on economic in Nigeria for the period 1970 to 2009. The tool of analysis was the OLS multiple regression models specified on perceived causal relationship between government expenditure and economic growth. Results of the analysis showed that capital and recurrent expenditure on economic services had insignificant negative effect on economic growth during the study period. Also, capital expenditure on transfers had insignificant positive effect on growth. But capital and recurrent expenditures on social and community services and recurrent expenditure on transfers had significant positive effect on economic growth.

Tajudeen and Ismail (2013) analyzed the impact of public expenditure on economic growth in Nigeria during the period 1970 to 2010 making use of annual time series data. The study employs the bounds testing (ARDL) approach to examine the long run and short run relationships between public expenditure and economic growth in Nigeria. Their findings indicate that total public expenditure have negative effect on economic growth in Nigeria.

Ali Sulieman Al-Shatti (2014) examine the impact of the public expenditures on economic growth in Jordan during the period 1993 to 2013, by determining the contribution of the current and capital expenditures on Education, Health, Economic Affairs, and Housing and community Utilities as a percent of the total public expenditures, and then examining the impact of each one of them on economic growth in Jordan. The empirical results show that the impact of recurrent and capital expenditures on education has negative effect on economic growth in Jordan.

However, most of these studies were done in an environment different from that of Nigeria. Again, the time frames considered in these studies were short and the results from these studies are conflicting. These shortcomings have somehow contributed to the knowledge gap in the literature, thus warranting a more systematic and comprehensive study of the effect of public expenditure on economic growth in Nigeria

This study seeks to improve on the past studies by making use of a broad data set spanning 1985 to 2015 such data set is far more than those used in the previous studies. This work attempts to distinguish between long and short run effects of the variables in the model and determine the causalities among the variables used in the study.

1.3 Objectives of the Study

The main objective of the study is to investigate the effect of public expenditure on economic growth in Nigeria. The specific objectives include:

1. To determine the effect of Capital Expenditure on road and economic growth.
2. To investigate the effect of capital expenditure on agriculture and economic growth.
3. To determine the effect recurrent expenditure and economic growth in Nigeria

1.5 Hypotheses

The following hypotheses would be tested to guide the study:

Ho₁: Capital expenditure on road has no significant effect on the economic growth in Nigeria.

Ho₂: Capital on expenditure on agriculture has no significant effect on the economic growth in Nigeria.

Ho₃: Recurrent expenditure has no significant effect on the economic growth in Nigerian

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

The function of government expenditures towards the promotion and implementation of government activities in an economy will not be over emphasize. Government expenditure implies the expenses incurred by the government for the maintenance and provision of public goods, services and works needed to enhance economic growth and improve the welfare standards of living of the citizens. Generally, government expenditures can be differentiated into expenditures on administration, defence, internal securities, health, education, foreign affairs, etc. and have both capital and recurrent components.

Capital expenditure refers to the amount spent in the acquisition of fixed (productive) assets (whose useful life extends beyond the accounting or fiscal year), as well as expenditure incurred in the upgrade/improvement of existing fixed assets such as lands, building, roads, machines and equipment, including intangible assets. Expenditure in research also falls within this component of government expenditure. Capital expenditure is usually seen as expenditure creating future benefits, as there could be some lags between when it is incurred and when it takes effect on the economy. Recurrent expenditure on the other hand refers to expenditure on Purchase of goods and services, wages and salaries, operations as well as current grants and subsidies (usually classified as transfer payments). Recurrent expenditure, excluding transfer payments, is also referred to as government final consumption expenditure. The annual budget spells out the direction of the expected expenditure, as it contains details of the proposed expenditure for each year, though the actual expenditures may differ from the budget figures due, for example, to extra-budgetary expenditures or allocations during the course of the fiscal year.

Federal expenditure in Nigeria is classified into expenditures in government functions such as administration, social and community services, economic services and transfers. Expenditure on administration includes general administration, defense, internal security and national assembly. Expenditures on social and community services include those on education, health and other social and community services. Expenditures on economic services include those on agriculture, construction, transport and communication and other economic services. Government transfers include public debt servicing, pensions and gratuities, contingencies/subventions, etc. (CBN Statistical Bulletin, 2011). With the exception of

government transfers, other classes or categories of government expenditure have capital and recurrent components.

2.1.1 Nature and Concept of Public Expenditure

Public expenditure is an important instrument for government to control the economy. It plays an important role in the functioning of an economy whether developed or underdeveloped. Public expenditure was born out of revenue allocation which refers to the redistribution of fiscal capacity between the various levels of government or the disposition of responsibilities between tiers of the government. Broadly speaking, public expenditure affects aggregate resources use together with monetary and exchange rate. Specifically public expenditure refers to the value of goods and services provided through the public sector. In the Nigerian economy public expenditure can broadly be categorized into capital and recurrent expenditure.

The recurrent expenditure are government expenses on administration such as wages, salaries, interest on loans, maintenance etc., whereas expenses on capital projects like roads, airports, health, education., telecommunication, electricity generation etc., are referred to as capital expenditure (Obinna,2003). The size of government expenditures and its effect on economic growth has been an issue of sustained interest for over decades now. The relationship between government expenditure and economic growth has continued to generate series of debate among scholars. Government performs two major functions- protection (and security) and provisions of certain public good (Al-Yousif, 2000). Scholars argue that increase in government expenditure on socio-economic and physical infrastructures encourage 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. As observed by Al-Yusuf and Couray (2009), Abdullah (2000), Ranjan, Sharma, (2008) and Cooray (2009) the expansion of government expenditure contributes positively to economic growth.

Olukoye (2009) the general view is that public expenditure either recurrent or capital expenditure, notably on social and economic infrastructure can be growth-enhancing. The provision of infrastructure services to meet the demands of business, households, and other users is one of the major challenges of economic development in developing countries like Nigeria.

As a result, public expenditure has maintained an upward trend over time in virtually all the countries of the world (Maku, 2009). The major items of public expenditure in Nigeria include: administration, economic services, infrastructures and social amenities, national security and defense, grants and aids and interest on loans. Public expenditure could be broadly classified into recurrent expenditure and capital expenditure. The expenditures of government which occur regularly throughout the year are referred to as recurrent expenditure. They must be made regularly if the functions of government must be maintained. They include regular salaries of all employees, money spent on the running of essential services or regular maintenance of infrastructural facilities and money spent on administration. Capital expenditure on the other hand are the expenditures of government on the acquisition of things of permanent nature (Nwaeze 2010). They include all expenditure on capital projects such as buildings, construction of roads, bridges and all permanent structures and assets. These usually involve large sums of

money and also form the basis of the physical development of a nation.

Fiscal policy comes into play in an effort by government to enhance growth and development in an economy through the variation of its revenue and expenditure profiles. By fiscal policy, we refer to the part of government policy which is concerned with the raising of revenue through taxation and other means and deciding on the level and pattern of expenditure for the purpose of influencing economic activities (Anyanwu, 1993).

2.1.4 Economic Growth

Ayres & Warr (2006) define economic as 'a rise in the total output (goods or services) produced by a country'. It represents an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. Economic growth refers only to the quantity of goods and services produced. Economic growth can be measured in nominal terms including inflation, or in real terms, which are adjusted for inflation like by the percent rate of increase in the gross domestic product (GDP). Economic growth measures growth in monetary terms and looks at no other aspects of development (Illyas and Siddiqi, 2010).

Economic growth can be either positive or negative. Negative growth can be referred to by saying that the economy is shrinking. Negative growth is associated with economic recession and economic depression (King and Levine, 1993). Gross national product (GNP) is sometimes used as an alternative measure to gross domestic product. In order to compare multiple countries, the statistics may be quoted in a single currency, based on either prevailing exchange rates or purchasing power parity. Then, in order to compare countries of different population sizes, the per capita figure is quoted (Beck and Web, 2003).

To compensate for changes in the value of money (inflation or deflation) the GDP or GNP is usually given in "real" or inflation adjusted, terms rather than the actual money figure compiled in a given year, which is called the nominal or current figure (Ayres and Warr, 2006). King and Levine (1993) and Beck and Web (2003) suggest that financial systems are important for productivity, growth and development. Well-functioning institutions and markets, it is noted, augment technological innovation, capital accumulation and therefore economic growth. They also note that well-functioning financial markets lower the costs of transaction increasing the amount of savings put into investment (Illyas and Siddiqi, 2010). They also allows for capital to be allocated to projects that yield the highest returns and therefore enhance economic growth

2.2 Theoretical Framework

This research paper would be anchored upon the Wagner's Law. This law was put forward by a German political economist, Adolph Wagner (1985 – 1997). 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 gross domestic product increases, so also public expenditure increases. The Wagner's school holds that the growth of an economy is accompanied by an increase in the share of public expenditure.

This research would be anchored upon the Wagner's Law, the theory suitable to this work most because it holds that the growth of an economy is enhanced by an increase in public expenditure.

Other theories that aids this research includes,

2.2.1 Theoretical Literature

2.2.2 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 like 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.

2.2.3 The Richardian Equivalence Theory

This theory postulates that consumers are forward looking and so factor-in the government's budget constraints when making their consumption decisions. The result is that for a given pattern of government spending, the method of financing that spending does not change aggregate demand. Thus, the theory is used as an argument against increasing government spending in an economy. Some studies that have empirically established this relationship are Muhlis and Hakan (2003), Singh and Sahni (1984), Ergun and Tuck (2006)

2.2.4 Musgrave Theory of Public Expenditure

As an outcome of Musgrave's reflection on the changes in the income elasticity of demand for public goods in relation to per capita income, Musgrave theory considered changes in demand for public goods which brings about government expenditures in three magnitudes of per capital income. At the low levels of per capita income, he opined that demand for public goods tend to be very low, this he justified by stressing that at this level, such income is devoted to satisfying prime needs that would have been provided by the government and as such government spending will be relatively low, however, he stressed that when per capita income starts to increase above these levels of low income, the demand for goods and services provided by the public sector such as health, education and transport etc starts to rise, thereby convincing government to increase disbursement on them. At the high levels of per capita income, particularly of industrialized economics, the rate of public sector growth tends to fall as the more basic wants are being achieved and the economy shifting from the public sector driven to private sector driven

2.2.5 The Keynesian Theory

This theory was propounded by the British economist; John Maynard Keynes. The theory became popular during the Great Depression of the 1930s. According to Keynes, public expenditure is an exogenous factor which can be utilized as a policy instrument to promote economic growth. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through the multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers. Some studies that have empirically confirmed this relationship are Omoke (2009), Olugbenga and Owoye (2007), John and George (2005), Ergun and Tuck (2006), Sevitenyi (2012), Abayomi and Taiwo (2011), Oni et al (2014)

2.3 Empirical Review

Notable research effort has been made on the effect of public expenditure on economic growth in Nigeria; these studies have shown conflicting results based on their findings and conclusions.

However this study would review those empirical studies, variable by variable using the objectives of the study

2.3.1 Public Expenditure and Economic Growth in Nigeria

Mutiu & Olusijibomi (2013) examines the relationship between public expenditure and economic growth in Nigeria during the period 1970-2009. A disaggregated public expenditure level was employed using the Gregory-Hansen structural breaks cointegration technique. The result confirms Wagner's law in two models in the long run; there was a break in 1993 in which the political crisis that engulfed the nation was accountable. The result also shows that economic growth and development are the main objectives of government expenditure, especially investment in infrastructure and human resources all of which falls under social and community services. Based on the result, there should be efforts to maintain adequate levels of investment in social and economic infrastructure.

Chris and Oyingaga (2015) investigated the effect of public expenditure on the growth and development of Nigerian economy (1980-2012). Three research hypotheses were formulated to guide the study. The hypotheses thus investigated the influence of aggregate expenditure, capital expenditure and recurrent expenditure on economic growth and envelopment in Nigeria. Data gathered were analyzed using Ordinary least square multiple regression statistical technique. Result of the findings revealed that aggregate expenditure had a positive impact on economic growth and development of the Nigerian economy, recurrent expenditure had a significant relationship on the growth and development of the Nigerian economy. The result also indicated that capital expenditure also had a significant effect on the growth and development of the Nigerian economy. The study recommended that the government should increase its spending on components of public expenditure which will in turn promote investment in the country.

Nworji , Okwu and Obiwuru(2012) examined the effect of public expenditure on economic in Nigeria for the period 1970 – 2009. The tool of analysis was the OLS multiple regression model specified on perceived causal relationship between government expenditure and economic growth. Data used in the model were those on gross domestic product (GDP), and various components of government expenditure. Results of the analysis showed that capital and recurrent expenditure on economic services had insignificant negative effect on economic growth during the study period. Also, capital expenditure on transfers had insignificant positive effect on growth. But capital and recurrent expenditures on social and community services and recurrent expenditure on transfers had significant positive effect on economic growth. Consequently, the study recommended more allocation of expenditures to the services with significant positive effect.

2.3.2 Capital Expenditure in road and Economic Growth

Tajudeen and Ismail (2013) analyses the impact of capital expenditure in road and economic growth in Nigeria during the period 1970 to 2010 .The study employs the bounds testing (ARDL) approach to examine the long run and short run relationships between public expenditure and economic growth in Nigeria. The bounds test suggested that the variables of interest put in the framework are bound together in the long-run. The associated equilibrium correction was also significant confirming the existence of long-run relationships. Their findings indicate a negative impact of total public expenditure on economic growth in Nigeria.

Ali Sulieman and Al-Shatti (2014) examine the impact of the public expenditures on economic growth in Jordan during the time period 1993 to 2013, by determining the contribution of the current and capital expenditures on road, Education, Health, Economic Affairs, and Housing and community Utilities as a percent of the total public expenditures, and then examining the impact of each one of them on economic growth in Jordan. Two mathematical models have been designed to measure this impact, the first one measures the impact of current functional expenditures, and the second model measures the impact of capital functional expenditures on economic growth in Jordan. The empirical results show that the impact of current and capital expenditures on education has failed to enhance economic growth, and that is due to the high cost of education, especially higher education in the private sector in Jordan, as well as the growing rate of unemployment, and expenditures on roads, health and economic affairs should be encouraged due to their positive impact on economic growth.

Olopade and Olopade (2010) assesses how fiscal and monetary policies influence economic growth and development in Nigeria. The essence of the study is to determine the components of government expenditure that enhance growth and development, identify those that do not, and recommend those that should be cut or reduced to the barest minimum. This study finds no significant relationship between most of the components expenditure, economic growth and development. The estimated result where mixed in particular, some of the variables were weakly significant as a result of none inclusion of effect of environmental impacts.

Chimobi, (2009), tested the direction of causality between government expenditure and national income in Nigeria using annual data for the period of 1970 – 2005. Cointegration and Granger causality test were used. The result showed that government expenditure plays a significant role in promoting economic growth in Nigeria.

Rehman, Iqbal and Siddifi, (2010), examined the nature and the direction of causality in Pakistan between public expenditure and national income along with various selected components of public expenditure by applying Toda – Yamamoto causality test Pakistan for the period of 1971 – 2006. The study found that there was a unidirectional causality running from GDP to government expenditure which supports Wagner's law. Moreover, at disaggregated level, result showed that GDP only caused administrative expenditure while no causality was found for development expenditure, debt servicing and defense expenditure on the whole, this study did not support the existence of the Keynesian hypothesis but at the aggregate and disaggregate levels in Pakistan.

2.3.3 Capital Expenditure in Agriculture and Economic Growth

Loto (2011), focused his analysis on sectoral expenditure, he conducted a study for Nigeria which covers the period 1980 to 2008, in which five key sector were investigated; security, health, education, transportation and communication and agriculture in his work. The result revealed that in the short run, expenditure on agriculture was found to be negatively related to economic growth. The effect of education was also found to be negative, but at a non – significant level. However, public expenditure on health was found to be positively related to economic growth, though expenditures on communication and transportation and national security were positively related to economic growth the impacts were not significant.

Rizvi and Shamam, (2010) investigated the relationship between government expenditure and gross provincial product (GPP) in the Sindh province of Pakistan. The study used data for 30

years (1979 – 2008). The result of the study found a long run relationship between development expenditure and economic growth, a unidirectional causality running from GDP to development expenditure was found.

Alm and Embaye (2011), examined the determinant of real per capita government spending in the republic of south Africa, using annual data for the period between 1960 – 2007. Evidence showed that per capita government spending was positively affected by external shock. These external shocks seemed to play a significant role in explaining the dynamics of government spending growth.

Dadan, (2011), investigated the impact of public expending on economic growth using a time series data on Jordan for the period 1990 – 2006 using the regression model. The study found that the government expenditure at the aggregate level had positive impact on the growth of GDP which is compatible with Keynesian theory. Usman, Mobolaji, Kilishi, Yaru and Yakubu, (2011), examined the efficacy of public expenditure on stimulating economic growth. The results showed that there was a long run relationship between public expenditure and growth.

2.3.4 Recurrent Expenditure and Economic Growth in Nigeria

Ayo and Ifechukwu (2012) examined the causality relationship among economic growth, recurrent expenditure and inflation rate in Nigerian over the period 1970 – 2001. The study showed the presence of bidirectional causality between government expenditure and economic growth both in the short run, a unidirectional causality existed from economic growth and recurrent expenditure to inflation while no feedback from inflation rate was observed.

Chaido and Melina (2012), determine the direction of causality between national income and government expenditures for 12 new members E.E. namely Bulgana, Cyprus Republic, Estonia, Solvenia and Slovakia. The result for Bulgaria and Cyprus was found to support the hypothesis that causality runs from government expenditure to national income the result of Granger causality test indicated that Wagner's Law was supported by the data of Cyprus, Poland & Romania. Desmond,

Titus, Timothy and Odiche (2012), examined the effect of public expenditure on economic growth in Nigeria during the period 1970 to 2009 .The result of the analysis showed that capital and recurrent expenditure on economic services had insignificant negative effect on economic growth during the period under study. Also capital expenditure on transfer had insignificant positive effect on economic growth.

Fan and Saurker (2012) analysed the trends of determination and impact of various forms of government expenditure or across 44 developing countries between 1980 and 2002 and found that total government expenditures over time. However, macroeconomic adjustments were found to reduce the size of total government spending, leading to different consequences for the various sectors. For almost all regions, the programs led to reduction in agricultural and infrastructural expenditures the performance of government spending on economic growth has found to be mind. In Asia and Africa, government spending in agriculture and education were found to be strong in promoting economic growth. In Latin America, spending in agriculture and social security had positive growth enhancing effects it was concluded that SAPs had a negative effect on growth in Africa, but no statistically significant effect in Asia and Latin America. Moreover, Agriculture expenditure, road and education were found to contribute strongly to agricultural growth. Disaggregation total agricultural expenditure into research and

non – research spending further revealed that research had a larger productivity enhancing impact than non – research spending. They therefore assert that to improve the efficiency of government expenditure, there is need to reallocate it among sectors.

2.4 Summary of Empirical Review

Chris and Oyingaga (2015) investigated the effect of public expenditure on the growth and development of Nigerian economy (1980-2012). Three research hypotheses were formulated to guide the study. The hypotheses thus investigated the influence of aggregate expenditure, capital expenditure and recurrent expenditure on economic growth and envelopment in Nigeria. Result of the findings revealed that aggregate expenditure had a positive impact on economic growth and development of the Nigerian economy, recurrent expenditure had a significant relationship on the growth and development of the Nigerian economy. The result also indicated that capital expenditure also had a significant effect on the growth and development of the Nigerian economy.

3.0 METHODOLOGY

3.1 Research Design

The study uses an ex-post facto research design because the data for the study are secondary data that already exist and the data covered the period of 1985 to 2015.

3.2 Nature and Sources of Data

The study used secondary data that was sourced from financial publications such as the Central Bank of Nigeria (CBN), Statistical Bulletin, annual report and accounts, Nigeria Bureau of Statistics (NBS) for the period for the period under study.

3.3 Variables of the Study

The model aim to regress capital expenditure on road, capital expenditure on agriculture and recurrent expenditure on economic growth is proxied by annual growth rate of Gross Domestic Product (GDPR) as the dependent variable (Y) while the explanatory variables (X) in this study are capital expenditure on road, capital expenditure on agriculture and recurrent expenditure

3.4 Model Specification

The model used for the study was the adaptation and modifications from the work of Omowumi, I. (2015) examined impact of foreign portfolio investment on economic growth in Nigeria

The model is stated thus:

$$GDPR = f(CER, CEA, RE)$$

Where:

GDPR = Annual Growth Rate of Gross Domestic Product

CER = Capital Expenditure on Road

CEA = Capital Expenditure on Agriculture

RCE= Recurrent Expenditure

β_0 and μ are the constant and error term respectively while β_1 , β_2 and β_3 are the coefficient of public expenditure on economic growth.

The equation form of the model is:

$$GDPR = \beta_0 + \beta_1 CER + \beta_2 CEA + \beta_3 RCE + \mu t$$

Where:

β_0 and μ are the constant and error term respectively while β_1 , β_2 and β_3 are the coefficient of capital expenditure on road, capital expenditure on agriculture and recurrent expenditure respectively.

3.6 Method of Analyses: The data will be analyzed with econometric techniques involving Augmented Dicker Fuller and Philip Perron tests for unit roots, Johansson technique for cointegration test for long run relationship and the Ordinary Least Square (OLS).

4.0 DATA PRESENTATION, ANALYSIS

4.1 Descriptive Statistics

	GDP	CER	CEA	RCE
Mean	6.587155	75.68479	5.138190	13.18276
Median	4.887400	78.48770	4.887400	13.70000
Maximum	20.85860	228.6423	33.73580	14.20000
Minimum	0.076600	2.062700	-10.75170	8.600000
Std. Dev.	6.478485	64.03453	7.704120	1.345381
Skewness	1.442398	0.505305	1.442398	-2.375729
Kurtosis	8.342689	2.614791	8.342689	7.447787
Jarque-Bera	44.54687	1.413411	44.54687	51.18399
Probability	0.000000	0.493267	0.000000	0.000000
Sum	149.0075	2194.859	149.0075	382.3000
Sum Sq. Dev.	1661.897	114811.8	1661.897	50.68137
Observation	29	29	29	29

The variables of the study shown on Table 1 above indicate that the gross domestic product (GDP) has mean of 6.58% with minimum value of 0.07% and maximum values of 20.85% respectively. However, the standard deviation is 6.47% indicating high variation in the (GDP) in Nigerian economy. This means that the Nigerian economy is relatively unpredictable and risky. This is capable of discouraging investment in the country.

Again, the ratio of capital expenditure on roads (CER) measures the extent to which gross domestic product (GDP) can be deployed on capital expenditure on roads construction. A high or increasing ratio will indicate problems of expenditure on roads construction. From the result, it can be seen that CEA is 75.68%. This suggests that 76% of the changes in GDP are accounted for by variations in capital expenditure on agriculture, the extent to which agriculture can free resources to improve the gross domestic product(GDP) is measured as the ratio of capital expenditure on agriculture to gross domestic product. From the results on Table 1 above, ratio of capital expenditure on agriculture outstanding to gross domestic product (GDP) which measures agricultural effect is 5.14%, with minimum value of -10.75170 and maximum values of 33.73580 respectively.

a. Unit Root

It is almost a convention in time series analysis, to verify the order of integration for each series to avoid the problem of spurious regression (see Granger and Newbold, 1974; Phillips, 1986). The enquiry into stationary property of each variable is conducted using Augmented Dickey-Fuller (Dickey and Fuller, 1979) and Phillips-Perron (Phillips and Perron, 1988) test procedures.

Table 2: The Unit Root Test

Variables	At Level				Decision
	Augmented Dicker Fuller Test		Philip and Peron Test		
	t-Statistic	Prob.	Adj. t-Stat	Prob.	
GDP	-2.133424	0.2339	-1.996650	0.2865	Not Stationary at level
CER	-1.156835	0.6783	-1.023858	0.7305	Not Stationary at level
CEA	-4.109778	0.0036*	-4.046948	0.0042*	Stationary at level
RCE	-8.662571	0.0000*	-9.114547	0.0000*	Stationary at level
GDP	-6.415193	0.0000*	-6.423403	0.0000*	Stationary at first difference
CEA	-3.128281	0.0378*	-5.654047	0.0001*	Stationary at first difference

The result of the unit root test shows that GDP and CER are non stationary at levels while CEA and RCE are stationary at level. However, all the variables (GDP, CER, CEA, and RCE) attained stationarity at 1st difference. This is indicated with the probabilities value of the test which is below 0.05 levels of significance.

4.3 Co-integration

After the test for the order of integration, the next step is to test for co-integration. This test is used to check if long run relationship exists among the variables in the model (Ogundipe and Alege, 2013). This will be carried out using the Johansen technique for cointegration.

Table 3: Cointegration Test for Long-run Relationship Between Public Expenditure and Economic Growth in Nigeria

Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05 Critical Value	Prob.**
No. of CE(s)	Eigenvalue	Statistic		
None *	0.857689	135.3988	95.75366	0.0000
At most 1 *	0.716711	82.75585	69.81889	0.0033
At most 2 *	0.484159	48.70113	47.85613	0.0415
At most 3 *	0.410603	30.82830	29.79707	0.0379
At most 4 *	0.347869	16.55460	15.49471	0.0345

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05 Critical Value	Prob.**
No. of CE(s)	Eigenvalue	Statistic		
None *	0.857689	52.64297	40.07757	0.0012
At most 1 *	0.716711	34.05472	33.87687	0.0476

At most 2	0.484159	17.87282	27.58434	0.5057
At most 3	0.410603	14.27370	21.13162	0.3430
At most 4	0.347869	11.54278	14.26460	0.1290

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The result of the cointegration indicate that, for trace statistic, five cointegrating equations exist at 0.05 level while for the Max-Eigen statistic, two cointegrating equation obtains at 0.05 level. Thus, the null hypothesis of no cointegrating equation is rejected using the Trace Statistics and the Max-Eigen value tests. This suggests the existence of a long run relationship among the variables at 5% level of significance. Thus, the study posits that there is presence of long run relationship between public expenditure and economic growth in Nigeria

4.5 The Ordinary Least Square Regressions

In this section, we provide the benchmark test of the significance of the independent variables in explaining the effect of public expenditure on economic growth in Nigeria.

Ordinary Least Square Regressions

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPR	15.73210	5.435635	2.543973	0.0003
CER	1.668951	0.991508	2.683245	0.0001
CEA	1.342700	-0.099069	2.339468	0.0002
RCE	-0.145270	-0.695746	0.208798	0.8381
R-squared	0.909033	Mean dependent var		6.897917
Adjusted R-squared	0.898550	S.D. dependent var		1.094669
S.E. of regression	0.601022	Akaike info criterion		2.096940
Sum squared resid	4.334733	Schwarz criterion		2.444891
Log likelihood	-12.92093	F-statistic		7.951898
Durbin-Watson stat	1.068708	Prob(F-statistic)		0.001265

Computed by the Authors with E-View Software

From the above regression coefficients, we can express the model as follows:

$$GDPR = 15.73210 + 1.1668951CER + 1.342700CEA - 0.145470RE + e$$

From the results of the OLS, it is obvious that the constant parameter (Bo) is positive at +15.73210. This means that if all the independent variables are held constant, GDP as a dependent variable will grow by 15.73210 units in annual-wide basis.

For Capital Expenditure on Road: the coefficient of CER is +1.668951. This means that capital expenditure on road have positive and significant effect on gross domestic product (GDP). A unit increase in capital expenditure on road (CER) will cause GDP to increase by 1.668951 units.

For Capital Expenditure on Agriculture: The coefficient of capital expenditure on agriculture (CEA) is positive at +1.342700. This means that capital expenditure on agriculture have positive and significant effect on gross domestic product (GDP) within the period under study. A unit increase in capital expenditure on agriculture will lead to a unit increase in GDP by 1.342700.

For Recurrent Expenditure: the coefficient of recurrent expenditure on economic growth (RCE) is negative at -0.145270. This means that recurrent expenditure have negative and insignificant effect on gross domestic product (GDP). A unit increase in recurrent expenditure on will lead to a decrease in gross domestic product (GDP) by 0.145270 units.

Finally, the Adjusted R-squared 0.898550 which is approximately 90%. This means that 90% of total variation in gross domestic product (GDP) can be explained by the variables namely CER, CEA and RE while the remaining 10% is due to other stochastic variables. The Durbin-Watson statistics (at1.068708) is below the critical threshold; this means the model is free from autocorrelation.

5.1 Conclusion

The result of the study indicates that capital expenditures on road and agriculture, have significant positive effect on gross domestic product(GDP), while recurrent expenditures has negative effect on gross domestic product(GDP). The study therefore concludes that public expenditure have positive effect on economic growth in Nigeria and have helped to improve the standard of living of average Nigerian citizen within the period under study. The results of our findings are consistent with Adewara and Oloni (2012) in terms of capital expenditures on agriculture and capital expenditures on road. It was discovered that the variables have positive effect in Nigeria.

However, our findings that recurrent expenditure has negative effect on gross domestic product (GDP) are inconsistent with the work of Dauda (2011) In terms of recurrent expenditures on economic growth. It was discovered that the variables have positive effect in Nigeria. All these discrepancies could be attributed to data coverage and perhaps method of data analysis. The contradictory results obtained in all of these are not surprising. Qadri and Waheed (2011) suggested that recurrent expenditure in any economy improve the functioning of the government thereby attracting investment in physical capital which in turn increases output.

Finally, the Adjusted R-squared 0.898550 which is approximately 90%, this means that 90% of total variation in gross domestic product (GDP) can be explained by the variables namely CER, CEA and RE while the remaining 10% is due to other stochastic variables. The Durbin-Watson statistics (at1.068708) is below the critical threshold; this means the model is free from autocorrelation.

5.2 Recommendations of the study

Following our findings, the study recommends that, Government should set up appropriate monitoring mechanism to ensure that funds are not misappropriated, and that adequate funds are applied to areas of needs especially capital expenditure on roads and agriculture which revealed positive effect on economic growth in Nigeria. The existing agencies such as economic and financial crime commission (EFCC) and ICPC should ensure that they leave up to their binding. There has been public outcry that the officials of these agencies are being checkmated to the extent that they look the other way in the performance of their duty. For further studies, we recommend the inclusion of other public expenditure variables in the model.

References

- Abu Al-Foul & Al-Khazali M (2003) the impact of public expenditure on economic growth in Jordan. *International Journal of Economics and Finance*, 6(10), 157-166.
- Abu, N & Abdullah, U (2010). Government expenditure and economic growth in Nigeria (1970-2008): A disaggregated analysis. *Business and Economic Journal*, 4(3), 237-330.
- Acaroglu, H (2014). The relation between human capital and economic growth in MENA countries. *Journal of Public Administration and Governance*, Vol. 4(3), pp. 205-215. Retrieved from www.macrothink.org/jpag.
- Adelowokan G, & Osoba , M (2015) Oil revenue, government expenditure and poverty rate in Nigeria: Global journal of management and business research
- Adelowokan O and Osoba A.(2015) Oil Revenue, Government Expenditure and Poverty Rate in Nigeria: Global Journal of Management and Business Research: B Economics and Commerce Volume 15 issue 10 Version 1.0 Year 2015
- Adeniyi, O. M & Bashir, A. O (2011). Sectoral analysis of the impact public investment on economic growth in Nigeria (1970-2008). *European Journal of Social Sciences*, 20(2), 259
- Adewara, S. O & Oloni, E. F (2012). Composition of public expenditure and economic growth in Nigeria. *Journal of Emerging Trends in Economics and Management Sciences*, 3(4), .403-407.
- Adeyemi A. O and Stephen O (2012) government spending and economic growth in nigeria: evidence from disaggregated analysis: *Jel Classification: C32, E12, H55, O47*
- Akpan, N. I (2005). Government expenditure and economic growth in Nigeria: A disaggregated approach. *CBN Economic Finance Review*, 43(1), 51-69.
- Alexiou, C (2009). Government spending and economic growth: Econometric evidence from South Eastern Europe. *Journal of Social Research*, 11(1), 1-16.
- Al-Shatti, A. S (2014). The impact of public expenditure on economic growth in Jordan. *International Journal of Economics and Finance and Commerce*, April 2016, vol. 21, no. 2
- Colantonio, E., Marianacci, R & Mattoscio, N (2010). On human capital and economic development: Some results for Africa. *Procedia-social and Behavioural Sciences*, 9, 266-272.
- Cornelius M, N, & Ogar A (2015) Government Expenditure and Its Implications on Nigerian Economy: *IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 21, Issue 1, Ver. II (Jan. 2016)*
- Cyrus, M (2013) the relationship between government revenue and economic growth in Kenya .:international journals of social science and project planning management vol.issue 1,2013
- Damian C. N and Harrison O. O (2014) Government Revenue and Expenditure in Nigeria: a Disaggregated Analysis: *Asian Economic and Financial Review*, 2014, 4(7): 877-892
- Dauda, R. S (2011). Effect of public educational spending and macroeconomic uncertainty on schooling outcomes: Evidence from Nigeria. *Journal of Economics, Finance and Administrative Sciences*, 16(31).
- Edogbanya, A & Ja'afaru G. S (2013) Revenue generation: it's impact on government developmental effort (a study of selected local council in kogi east senatorial
-

- Egbetunde, T & Fasanya, I. D (2013). Public expenditure and economic growth in Nigeria: Evidence from autoregressive distributed lag specification. *Zagreb International Review of Economics and Business*, 16(1), 79-92.
- Emranul H. and Denise R. (2003). Public Expenditure and Economic Growth: Further evidence from Nigeria: *Journal of Economics and International Finance: Vol. 5(4)*, pp. 146-154,
- Gabriel Chukwu Nkechukwu and Johnson Ifeanyi Okoh (2013) Capital Expenditure at Disaggregated level and Economic Growth in Nigeria: An Empirical Analysis: *International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064*
- Kanayo O. T (2012). Testing the Relationship between Government Revenue and Expenditure: Evidence from Nigeria: *International Journal of Economics and Finance; Vol. 4, No. 11; 2012*
- Keynes, J. M (1936). *The General Theory of Employment, Interest and Money*. New York, Macmillan Cambridge University Press.
- Kuhar, A (2007). Evaluation public expenditure on economic growth of the Peripheral Slovenia with input-output model. *Acta Agricultural Sloveni*, 8bldec, 49- 61. <http://aas.bf.uni> .
- Kweka, J. P & Morrissey, O (2000). Government spending and economic growth in Tanzania (1965- 1996). Centre for Research in Economic Development and International Trade (CREDIT), *Research Paper No. 0016*. Nottingham, University of Nottingham.
- Loizides, J & Vamvoukas, G (2005). Government expenditure and economic growth: Evidence from trivariate-causality testing. *Journal of Applied Economics*, 3(1), 125-152.
- Loto, M. A (2011). Impact of government sectoral expenditure on economic growth. *Journal of Economics and International Finance*, 3(11), 646-652.
- Maku, O. E (2009). Does Government spending spur economic growth in Nigeria? *MPRA Paper, No. 1794*.
- MakuaChukwu G and Ogbodo, J (2015) Fiscal Federalism in Nigeria: Implication for Growth: *British Journal of Economics, Management & Trade 5(4): 442-449, 2015, Article no.BJEMT.2015.037 ISSN: 2278-098X*
- Matthew A. A (2014) the impact of tax revenue on Nigerian economy (Case of federal board of Inland Revenue): *Journal of Policy and Development Studies Vol. 9, No. 1*
- Mutiu A O. and Olusijibom A (2013) Public expenditure and economic growth nexus: Further evidence from Nigeria: *Journal of Economics and International Finance Vol. 5(4)*, pp. 146-154, July, 2013
- Mutiu O and Olusijibomi. A (2013). Public expenditure and economic growth nexus: Nigeria's Economic Growth: *European Journal of Globalization and Development Research, Vol. 9, No. 1, 2014*
- Niloy. B , M, Emranul H. and Denise R O. (2007) Public Expenditure and Economic Growth: A Disaggregated Analysis for Developing Countries: Centre for Growth and Business Cycle Research, School of Economic Studies, University of Manchester, Manchester, M13 9PL,
- Nurudeen, A & Usman, A (2010). Government expenditure and economic growth in Nigeria (1970- 2008): A disaggregated analysis. *Business and Economics Journal*, 4, 1-11.
- Nwaeze, C, Njoku R. and Nwaeze, O. (2014) Impact of Government Expenditure on Nigeria's Economic Growth: *The macrotheme Review , A multidisciplinary Journal of global macro trends*
- Nworji, I. D., Okwu, O. T., Obiwuru. C & Nworji, L. O (2012). Effects of Public expenditure on economic growth in Nigeria. *International Journal of Management Sciences and*
-

Business Research, 1(7).

- Obiamaka E. (2016). Analysis of Government Disaggregated Expenditures and Growth of Nigerian Economy: *Journal of Internet Banking*
- Ogbuagu M. I. (2015) Estimating the impact of the components of public expenditure on economic growth in Nigeria (a bound testing approach): *International Journal of Economics, Commerce and Management United Kingdom Vol. III, Issue 3, March 2015*
- Ojide G. and Joseph, C. (2015) Fiscal Federalism in Nigeria: Implication for Growth: *British Journal of Economics, Management & Trade*
- Okoro, A. S (2013). Government spending and economic growth in Nigeria (1980-2011). *Global journal of management and business research*
- Olapade, B. C & Olapade, D. O (2010). Impact of government expenditure on economic growth and development in developing countries: Nigeria as a case study.
- Olatunji Emmanuel and Adegbite Adejare (2014).the effects of petroleum profit tax, interest rate and money supply on Nigerian economy: *global journal of commerce & management perspective .G.J.C.M.P., Vol.3(3):81-87 (May-June, 2014)*
- Olopade B.C and Olopade D.O (2000) the impact of government expenditure on economic growth and development in developing countries: Nigeria as a case study
- Oyinbo, O., Zakari, A & Rekwot, G. Z (2013). Agricultural budgetary allocation and economic growth in Nigeria: Implications for agricultural transformation in Nigeria, 10(1) 16-27
- Oyinlola, M. A & Akinnibosun, O (2013). Public expenditure and economic growth nexus: Further evidence from. Nigeria. *Journal of Economics and International Finance, 5(4), 146-154.*
- Oziengbe Scott Aigheyisi (2013). The Relative Impacts of Federal Capital and Recurrent Expenditures on Nigeria's Economy: *American Journal of Economics 2013, 3(5): 210-221*
- Qadri, F. S & Waheed, A (2011). Human capital and economic growth: Time series evidence from Pakistan. *Pakistan Business Review.*
- Shuaib, I.M., Mohammed, M. K. and Igbinosun, F.E (2015) Government Expenditure: Impact on the Nigerian Economic Development: *International Journal of Research in Business Studies and Management Volume 2, Issue 6, June 2015, PP 74-87*
- Tajudeen Egbetunde and Ismail Fasanya (2013)Public Expenditure and Economic Growth in Nigeria: Evidence from Auto-Regressive Distributed Lag Specification: *Zagreb International Review of Economics & Business, Vol. 16, No. 1, pp. 79-92, 2013*
- Udoka, C and Roland, A (2015).The Effect of Public Expenditure on the Growth and Development of Nigerian Economy: *International Review of Management and Business Research Vol. 4 Issue.3*
- Wang, K (2011). Health care expenditure and economic growth: Quartile panel-type analysis. *Economic Model, 28(4), 1536-1549.*
- Yildirim, N. O & Keshin, H (2011). Military expenditures, economic growth and spatial spillover: A global perspective. *Conference on Applied Economics – ICOAE, 811-819*