EFFECT OF GOVERNMENT EXPENDITURE COMPONENTS ON NIGERIA ECONOMY

BY

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DECLARATION

I, **ShakavworiaBrukohwo**, declare that this Dissertation is my own original work and that no portion of the work referred to in this Dissertation has been or will be submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by Delta State University a dissertation entitled: "Effect of Government Expenditure Components on Nigeria economy" in partial fulfillment of the requirements for award of Master of Science (M.Sc) Degree in Banking and Finance.

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DEDICATION

This dissertation is dedicated to Almighty GOD who has made all things beautiful in His time.

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ABSTRACT

This research work explores the effect of government expenditure components on Nigeria economy such as General Administration Expenditure, Defence Expenditure, Education Expenditure and Health Expenditure from (1981-2016). The work identifies that despite the continuous increament in government expenditure,there is still a persistence economic backwardness in Nigeria. The author sought to examine the effect of the known variables on economic growth of Nigeria.The Ex-post facto research design was used and Time series data were generated from the Central Bank of Nigeria (CBN) statistical bulletins of various years spanning from 1981 to 2016. The non probability sampling technique was employed. The Ordinary Least Square (OLS) technique of assessment was employed in the multiple regression analysis. The result revealed General Administration Expenditure has a positive and significant impact on economic growth; Defence Expenditure has a negative andinsignificant effect onGDP; Education Expenditure has a positive and highly significant impact on economic growth; and Expenditure on Health has a positive but insignificant effect onGDP. Among the recommendations were that government should ensure that her expenditure whether capital or recurrent should be managed and monitored at the implementation phase to improve comparable accomplishment viz-a-vizon economic growth.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

The need to better the lots of citizens through government expenditure (viz a-viz recurrent and capital expenditure) has raised questions on the effect of government expenditure on economic development and growth of nations. In Nigeria and other developing economies, over the years, there has been continuous increase in government spending without an appreciable and comparable increment in economic growth and development. These have led to numerous researches on the role of government spending in the long term growth of national economies.

In either developed and developing countries there is a compassion for improving living standards over time, but this need is much more shown in developing countries, given the extent and depth of poverty in these countries. In the relative absence or continuing inadequate quality of institutions to assemble and direct savings, the role played by the state is important in managing the resources for development (Gwartney et al, 2013). Since the regulatory body is weak and market signals not perfect, the state has a crucial role to play in distributing resources to all sector of the economy. Further, with the spread of poverty, there is the anticipation that fiscal expenditures would play a key role in anti poverty programs.

In Nigeria, regardless of the large amount of spendings, there is still no significant level of development. Government spendings on all sectors of the Nigerian economy is anticipated to lead to economic growth in the light that capital and recurrent expenditure will improve the productive base of the economy which in turn will lead to growth. The findings by financial experts and economist in Nigeria and other jurisdictions on the effect of government expenditure is still inconclusive.

The relationship between economic growth and government spending is an important topic of analysis and debate Mitchell (2015). The general question is whether or not public sector expenditure raises long run growth of the economy. Some researchers are of the opinion that public expenditure, mainly on productive infrastructure and human capital, can be growth improving although the financing of such expenditures can be growth retarding in the short-run.

Government expenditure is a vital tool for government to control the economy. It plays a crucial role in the functioning of an economy whether developed, developing or under developed. It is the expenses which government incurs for the maintenance of the government and the society in general (Oriakhi 2012). They also can be refer to as expenses which government incurs in carrying out its programmes (Okoh 2012). While Anyanwu (2012) posit that government expenditure involves all the expenses which the public sector incurs for its maintenance and for the good of the economy.

Government expenditure is a major component of national income as seen in the expenditure approach to measuring national income: (Y = C+I+G +(X — M)). This means that government expenditure is a major factor of the size of the economy and of economic growth. The effectiveness of government expenditure in widening the economy and providing speedy economic growth depends on whether it is productive or unproductive. All things being equal, productive government expenditure is likely to have positive effect on the economy, whilst unproductive expenditure is likely to have the reverse effect.

For the purpose of this research work, a comprehensive analysis will be tailored towards a disaggregated approach of some selected capital expenditure and recurrent expenditure as the independent variables to investigate which among these variables, selected from the expenditure components will have a positive and significant effect on economic growth and which one will not. The variable index for recurrent

expenditure would be General Administration and Defence while the variable index for capital expenditure would be Education and Health whilst the dependent variable will be GDP.

In Nigeria, costs (General Administration Expenditure) attributed with the running of the government have increased extensively over the years in a way that a highly reduced proportion of public revenue is available to support and implement the primary functions of government (CBN, 2014). Consequently, the key purposes of government have been impeded. A point of departure is to observe how the federal Government budget is allocated strictly between recurrent and capital expenditures. The reason for using recurrent expenditure as a percentage of total budget as a key indicator of the cost of governance descends from the belief that capital expenditure impacts more positively on the economy considering investment, employment and other growth-inducing activities (Adewole and Osabuohien, 2013). In the course of this work General Administration Expenditure can also be seen as administrative cost or administrative expenditure.

General administration expenditure as a percentage of gross domestic product (GDP) was high as 8.72% in 1977 but fell to an all time low of 2.04% in 2002. According to Adewole and Osabuohien (2013), if we assumed that government administrative expenditure supports the Gross Domestic Product of any given society, then an administration expenditure of almost 9 kobo went into the production of N1 worth of goods and services for the period of 1977 to 2002. Over the succeeding years, the administration costs of yielding N1 worth of goods and services fell to 2 kobo in 1989. It rose to 4 kobo in 1999 and then to 7 kobo in 2002. According to Haber (2004), much of the hike costs of governance are largely due to the epilepsy of institutional structures that direct attention away from predation to production. When the primary activities of the state is importantly redistributive or predatory, productive activities become less significant as a driving force of economic activities. Defence expenditure is surely not without effect on resource distribution and economic growth.

The effects are multiple and often offset one another. The world defence expenditure in 2001 was estimated at $839 billion. This estimate accounted for 2.6 percent of world Gross Domestic Product and a world average of $137 per capita. This was contained in Stockholm International Peace Research Institute yearbook (SIPRI yearbook 2013). Countries with high income, the industrialized nations had the highest defence spending whereas, developing countries especially those in Africa had the heaviest debt burden and the lowest defence spending (Brempong, 2014).

Statistically, defence expenditure in Nigeria which was N538.2 million in 1970 (in nominal terms) increased rapidly to N3.206 million in 1980 and later rose to N3.939 million and 12.169 million in 1994 respectively. In 1998, the expenditure on defence was about N23.08 million and rose to N111, 868 in 2005. The structure of defence expenditure which comprises of capitaland recurrent expenditures has been sustained. For example, defence recurrent expenditure was N88, 053 million while capital expenditure was N22, 093 million in 2002. In 2006, both defence recurrent and capital expenditures fell to N83,674.0 million and N14,636.0 but rose to N102,597.27 million and N144,17.24 million for 2007 respectively (CBN statistical bulletin, 2014). Although defence expenditure has been fluctuating there has been a rapid upward swing.

Education has been seen as the most vital instruments in the process of economic growth and development. However, one issue that has not been addressed adequately is its provision in the required quantity and quality. For instance, while secondary school gross enrolment ratio in 2007 stood at 101 percent for high income countries, the value was 38 percent for less income countries. Even at that, Nigeria's value stood at 32 percent which was six percent lesser than the average for low income countries (World Development Indicators 2013). The nature of education, the prevailing economic system and government priority are factors that could influence its level in any economy.

Health provision is seen as a major indicator of a policy to promote broad-based economic growth. The worry of diseases as in HIV/AIDS is known to slow the economic growth of developing countries. Therefore, every country dedicate large public fund to provide health care believing this would improve the health of the citizens so that they can assist meaningfully to economic growth and development. In Nigeria, for example, in spite of the huge government expenditure on health provision, the health situation of Nigerians is constantly ranked low. Nigeria ranked 74th out of 115 countries, based on the performance of some selected health indicators (World Bank, 2013). Nigerian overall health system performance was also ranked 187th among the 191 Member States by the World Health Organization (WHO) in 2013 (National Health Policy, 2014). Nigeria rate of infant mortality (91 per 1000 live births) is among the highest in the world. It is therefore imperative to ask if government has an impact on the effectiveness of health expenditure in Nigeria. Economic growth is measure by gross domestic product and will proxy for Nigeria economy.

1.2 Statement of the Problem

It is a fact that no society throughout history has ever obtained a high level of economic affluence without a government. Government is important and necessary, though by no means sufficient, condition for prosperity (Vedder and Gallaway, 2012). Due to the nature of this research work, the following problems will be looked into. General Administrative Expenditure: Is the money spent on administrative processes. In Nigeria, costs attributed with the running of the government have risen extensively over the years. There are specific factors responsible for this increasing cost of governance in Nigeria. There is the case of inflation. Public project costs are unfairly inflated by corrupt politicians. Similarly, the issue of public funds mismanagement is another cause of the increasing cost of governance in Nigeria. Political leaders unduly

increase the costs of public projects, include ghost workers into the payroll of the government to embellish themselves.

Defence: It cannot be denied that defence spending increases national security and therefore improves the environment within which and development growth prosper. The tranquility and security even after the end of civil war in 1970 have been threatened. Recently, we had the boko haram sect which is a religious group threatening the tranquility and security of some states in the north. In the west, south and eastern states of Nigeria, the issue of kidnapping in which the kidnappers demanded large sum of money from their victims before releasing them, is a real threat to lives and property, business and economic growth.

Education: One thing that has been identified as the most vital instruments in the process of economic growth and development is education. However, one issue which has not been seriously attended to in Nigeria is its provision in the required quantity and quality. In 2016, the education sector which got #369.6bn from a total national budget of #6.07tr was described as still the lowest since 2012. Again, in the budget 2017 where stakeholders were anticipating higher budgetary funding for education, looking at the outstanding debt from the 2009 ASUU/FG agreement, the budget was still appalling to the reality on ground. According to United Nations Educational, Scientific and Cultural Organization (UNESCO) Nigeria has not met the requirement of 26% allocation of her budget to education sector for developing economy.

Health: According to World Health Organization (WHO) the ultimate responsibility of a good health sector remains with the government. It is evident in Nigeria that the health sector is performing poorly. This is not due just to income or expenditure, but the way Nigeria health system is designed, managed and financed. The difference between a good health sector and one that is bad could be measured in the rate of disability, death, humiliation, impoverishment, and despair.

These are problems faced with the Nigeria health system . In the view of the foregoing, the following problems are listed below:

1) General Administrative expenditure and Gross Domestic Product.
2) Defence Expenditure and Gross Domestic Product.
3) Education Expenditure and Gross Domestic Product.
4) Health Expenditure and Gross Domestic Product.

Amidst all these issues and challenges, the government has continuously increased her expenditure. Therefore, one would anticipate that there would be a comparable achievement on Nigeria economic growth, but otherwise has been the case.

1.3 Research Questions

This work is to investigate and determine the effect of government expenditure components on Nigeria economic measured by gross domestic product. In order to achieve this, the following research questions is raised to direct the investigations.

1. What is the effect of government General Administrative expenditure on Gross Domestic Product in Nigeria?
2. What is the impact of Defence expenditure on Gross Domestic Product in Nigeria?
3. To what extent does Education expenditure impact on Gross Domestic Product in Nigeria?
4. What is the effect of Health expenditure on Gross Domestic Product in Nigeria?

1.4 Objectives of the Study

The key objective of this study is to ascertain if there is an impact in government expenditure and economic growth in Nigeria. The specific objectives are:

1. To determine the extent of the effect of government General Administrative expenditure on Gross Domestic Product in Nigeria.
2. To determine the extent of the impact of Defence expenditure on Gross Domestic Product in Nigeria

3. To examine the impact of Education expenditure on Gross Domestic Product in Nigeria.
4. To determine the extent of the impact of Health expenditure on Gross Domestic Product in Nigeria.

1.5 Research Hypothesis

The following hypothesis is tested at 0.05 level of significance;

$H0_1$: There is no significant impact between government General Administrative expenditure and Gross Domestic Product.

$H0_2$: There is no significant impact between Defence expenditure and Gross Domestic Product.

$H0_3$: There is no significant impact between Education expenditure and Gross Domestic Product.

$H0_4$: There is no significant impact between Health expenditure and Gross Domestic Product.

1.6 Scope of the Study

In research study of this kind, there is normally the enthusiasm to cover as many areas as possible that are linked to the various needs of such study.

However due to the scope and nature of this research work, such a wild scope is out of the question since a work of this kind can hardly achieve a feat. This work examined mainly the effect of some selected government expenditure components on Nigeria economy. This work is based on time series approach covering the period 36years spanning from1981 to 2016.

This research study relied heavily on secondary data that is sourced from CBN Statistical Bulletin.

1.7 Limitations of the study

In the course of conducting this research work, the following constraints were experienced; Difficulty in getting the hard copy of CBN Statistical Bulletin from CBN. Hence, the researcher has to consult soft copy of CBN statistical bulletin, journal and the internet in other to come up with the right figures.

1.8 Significance of the study

The relationship between public expenditure and economic growth is important for developing countries, like in Nigeria, most sector have experienced increment in the level of public expenditure. (Lindauer and Valenchik, 2012). Because of the crucial role public expenditure plays in the country; this study will be significant and of large benefits to various interest groups.

i. It will serve as information in the minds of government policy makers in formulating policies to which the result of this work would provide a useful input so as to control wasteful spending.
ii. It would be of great value as a source of reference to Management students who may wish to research further in the area of public expenditures and economic growth.
iii. It would create enlightenment to non-management students on the effect of public expenditure on economic growth.
iv. This work will be useful in improving other public sector of the Nigeria economy and it will contribute to the effectiveness of public sector and other industries.

1.9 Definition of Terms

General Administration Expenditure: This is expenses incur in running the government. Increase in general administration is a leakage to the economy and will have a negative impact to Gross Domestic Product

Defence Expenditure: this is expenses incur to take care of our military. An increase in defence expenditure will have a positive effect to Gross Domestic Product because it will bring about protection to life and properties.

Education Expenditure: this is expenses incur in maintaining the educational sector of the economy. An increment in education expenditure will contribute to human capital development that will lead to increase in the Gross Domestic Product.

Health Expenditure: this is the expenses incur by the government in providing medic care and hospitals to the citizenry of Nigeria. Increase in health expenditure will lead to increase in Gross Domestic Product of Nigeria since the people will be healthy to work and go about business activities.

CHAPTER TWO
LITERATURE REVIEW

2.1 Conceptual Review

Government spending as a fiscal tool serves useful purpose in the process of taking care of inflation, depression, unemployment, balance of payment equilibrium and foreign exchange rate stability. In the time of depression and unemployment, government spending causes aggregate demand to rise and production and supply of goods and services follow the same direction. As a result, the rise in the supply of goods and services in addition with a rise in the aggregate demand exalt a downward force on depression and unemployment (Bhatia, 2013).

In the situation of constant rise in price (inflation) and the depreciation in the money value, it is certainly that reducing government expenditures discourages aggregate demand and inflation and the fall in the value of exchange rate are controlled. It is good to know that these two tools may be adopted simultaneously in the economy. An increase in government expenditure has equal effects in reducing the tax rates on aggregate demand. Similarly, the effects of a reduced government expenditures are the same as increases in tax rates (Okoh, 2012).

2.1.1 Nature of Public Expenditure

Bhatia (2013) defines Public expenditure as the expenses which a government incurs for (i) its own maintenance, (ii) the society and the economy, and (iii) helping other countries. Public expenditure means expenditure made by local, state and federal government agencies as different from those of private individuals. Public spending also consist of government payments for the goods and services acquired and for the works done in pursuant to their respective laws, social security contributions, interest payments of foreign and domestic debts, general borrowing expenditures, payments gotten from discounted sale of borrowing instruments, economic, social and financial transfers, grants and donations and others.

It is canonical to group public expenditure into diverse economic categories. Accounting groupings have been there for centuries because it enables the State Executives to effectively maintain check and control over public expenditure and possible leakages and wastage, diversion and misappropriations (Bhatia, 2013). It may be classification base on department or heads of expenditure. Classification as such is good for safeguarding and auditing against misappropriations, etc., but it does not help in the understanding of its effects. It is therefore, difficult to appropriately formulate an expenditure policy on this basis.

Pigou(2012) Posit that the difference between obligatory (or legally committed) expenditure and optional expenditure can only highlight the problems under which the governments budgetary policy has to work. It cannot bring out fully the possible effects of different expenditure policies. There is an alarming need for effective and useful classification of public expenditure to allow the gauging of the economic impacts and proper formulation of policies.

Economists group government spending into three major types (Gerson, 2012): (i) Government procurement of goods and services for current use are classified as government consumption; (ii) Government procurement of goods and services

planned to create future benefits, such as investment, infrastructure and research spending are grouped as government investment; and (iii) payments for debt services are grouped as transfer payments. The grouping of expenditure include the division of government transactions into order that would serve the purposes of government. Anyafo (2013) identifies five ways of classifying public expenditures: by levels of government, by ministries, extra-ministerial departments and parastatals, by economic life span, by object of expenditure and by sectorial economic functions. Public expenditures in Nigeria are functionally classified into four (CBN, 2014): Administration, Economic services, Social and Community services, and Transfers with capital and recurrent expenditure components.

Administration expenditure includes general administration, National Assembly, defence and internal security. Economic services include agriculture, construction, transport and communication and others; social and community services is made up of education, health and others; and transfer includes public debt charges, internal and external debts. Such a functional grouping helps in ascertaining how much the Government is distributing to distinct functions or reasons in conformity with the annual priorities (Ukwu, 2012).

Infrastructure expenditures involve disbursement of funds for the construction of diverse basic public works of the country, such as ports, roads, airports, irrigation, water supply and other capital investments, the advantages of which extend to the general public. In the national budget, infrastructure expenditures generally are those capital outlays of the ministries (Anyafo, 2013). An alternative characterization of expenditures divides total expenditure into the absorptive and transfer expenditures (Omoruyi, 2013). Absorptive expenditures refer to those transfer of funds from government to the private sector in return for goods and services whilst transfer payments do not have such quid pro quo status. In the Nigerian setting transfer payments involve external obligations,pension and gratuities, debt service, and others; absorptive expenditures are those on administration, economic, social and community

services. Partington (2012) opines that that the popular classification comprises of recurrent and capital expenditures.

As far back as 1909, Ely and Wicker (1909) provide assistance to catalogue public expenditure as: (i) Expenditures for fulfilling the protective tasks of the State. Of the overall class of expenditures sustained in fulfilling the protective function of the State, the first to be cited are those of external security, internal security and social security expenditures; (ii) Expenditures for fulfilling the commercial functions; (iii) expenditures for fulfilling the developmental function (i.e. education); and (iv) expenditures for the upkeep of Government.

For appropriate economic understanding of the likely effect of public expenditures on the development process, it is vital to categorize public expenditure in some evocative way. And since there are variations of classification system, the most appropriate for an specialist will depend on the intentions to be achieved. Aschauer (2014) farther acknowledge classifications of public expenditures in the background of productive and protective expenditures. Productive expenditure includes Economic services and Social and Community services, while protective expenditures include Administration (including defence) and Transfers. Likewise Devarajan, Swaroop, and Zou (2012) noted the productive and unproductive public expenditures when they express that productive expenditures, when used in excess, could become unproductive. The results of their study suggest that developing-country have been misallocating public expenditures in favour of capital expenditures at the cost of current expenditures.

Productive and unproductive expenditures emphasize that whilst certain number of expenditures are in the nature of consumption, others are in the nature of investments and help the economy in improving its productive capacity. Bhatia (2013) submits that under the laissez-faire philosophy, the only productive public expenditures are

those which are incurred to design and conserve social overheads. Expenditures on administration, defence, justice, law and order, and upkeep of State are unproductive (i.e. protective). It need be said, however, that these protective expenditures would be really important for the productive effectiveness of the economy.

Rele and Westerhout (2013) view the classification of public expenditure as clearly of an analytical nature. They distinguish two main categories. Category one contains consumption expenditures, which are expenditure items that produce benefits in the period in which the expenditure occurs. The second category is investments, which includes all items of public expenditure that produce benefits in the future. Investment expenditure includes (i) the investments that do not generate a financial return, but rather improve the (future) quality of life; (ii) investments that generate a financial return and lead to an increase of future government revenues (Rele and Westerhout, 2013). These are investments that strengthen the productive capacity of the economy and broaden the revenue base. This expenditure type comprise of the investment items that, aside from the first impact of the expenditure itself, it does not affect future budget surpluses. The reason for this is that these investments mainly increase productivity and thus wages. Rele and Westerhout (2013) opine that these investments will increase both expenditure and revenues, leaving (future) primary balances unaffected. The last of this type comprise of the investments that do not lead to an increment of expenditure and therefore improve future government budget balances. According to Rele and Westerhout (2013), There are two types of such investments; i) investments that generate a direct financial return through payments by operators of the government amenities (e.g. a medical provision that is partly funded by private means); ii) investments that promote labour participation.

The grouping of public expenditure into transfer and non-transfer expenditures was favoured by pigou (2012). Transfer expenditure are payments without equivalent receipt for goods and services by the State. Examples are pensions, interest payments,

and unemployment benefits. In these cases, the government is simply transferring the right or claim to use the goods and services to certain sections of the society. In contrast, non-transfer expenditure is that by which the State pays for its purchases or use of goods and services. The use of the resources by the State may be for consumption purposes or for investment purposes. Expenditures on defence and education are non-transfer or real expenditure (Aschauer, 2014).

2.1.2 Public Expenditure and Economic Growth

Public expenditure can help the economy in many ways in achieving higher levels of production and growth. The ways in which such effect might be brought about are obviously inter-related. The result of these effects can be taken up separately in the background of developed and developing economies (Bhatia, 2013). According to Aschauer (2014), public expenditure seems to influence the level of production in three possible ways:

a) **Effect on the Capacity to Work and Save:** Public expenditure provides diverse types of social and economic facilities stimulating the capacity to work of the people. Increased capacity entail increased efficiency and higher employment.Level of income and saving inclines, expediting larger investment and adding to the speed of growth. Dalton posits that just as taxation decreases an individuals capability to work, in the same way public expenditure raises the individuals capacity to work.

b) Desire to Work and Save: Public expenditure induces the publics willingness to work and save. As a result, their income and standard of living rise.

c) Redistribution of Economic Resources: Public expenditure makes the economy balanced by redistributing the income resource from unproductive sectors to productive ones. This results in increase in production. This effect varies between developed and developing countries.

The developed countries have enough of production capacity, but its optimum utilization does not take place as a result of low demand.

Consequently, there is low level of production. By increasing public expenditure, aggregate demand can be increased. Wealth can be distributed by increasing public expenditure among those who are willing to spend. Thus a rise in demand results in the rise in production. In the event of full employment already existing in the economy, increment in public expenditure will only increase prices instead of production.

In the developing countries, the level of savings being low, investment is low. Social overhead cost such as electricity, transport, irrigation, etc. are underdeveloped. These can be developed by direct public expenditure. Human capital can be developed by public expenditure on general and technical education, health and medical care facilities. Government can extend its helping hands in promoting capital formation. To the extent this capital formation is financed through foreign aid, the process of economic growth is accelerated. All these would augment production (Jain, Kaur, Gupta and Gupta, 2013).

Bhatia (2013) cautions that to maximize the importance of public expenditure and to avoid possible harmful incidental effects, firstly, the diverse projects have long gestation period, in which situation the output is delayed. Still they need to be financed, adding to the inflationary pressures. Therefore, care must be taken that inflationary pressures are put under control during the process of development.

Secondly, on account of faulty planning and execution, it is apparent that wastage can take place in public expenditure. This must be shunned. Thirdly, given the scarce resources, care must be taken to choose the most appropriate and most useful projects. Cost-benefits study may be needed to prioritize the projects. Fourthly, carefully, decision has to be taken regarding the quantity of public expenditure in diverse projects and on various measures expected to propel investment. The effects of the ways of funding the components of public expenditure must be considered. In

accelerating the rate of economic development, public expenditure can also prove helpful.

In sustaining a steady growth rate in developed countries, public expenditure can be helpful in maintaining the adequate amount of investment and consumption expenditure, so that the full employment rate of the economic development is steadily preserved. Jain et al. (2013) aver that in order to accelerate economic development in the developing economies, public expenditure plays a crucial role. Public expenditure facilitates roads, electricity, social overheads, irrigation, etc. Development of private industries and agriculture is thus assisted, markets expand and the rate of investment increases. If public expenditure is done through foreign capital, it may seem more efficient. If public expenditure is unproductive, it will only lead to price hike.

The distinct relationship that holds public expenditure and GDP is important for policy in two crucial respects (Arpaia and Turrini, 2012). First, it promotes the understanding of long-term, structural public finance issues. In particular, it would help to determine the impact on public expenditures and then on deficits arising from a structural deceleration in growth or, with a reverse, from an improvement on the growth potential. Second, a better knowledge of the change in correlation in both government expenditure and GDP helps in the understanding of policy-relevant matters over a short-to-medium term horizon. Placing of a dependable amount of the operational relationship between the non-cyclical composition of government spending and potential output is way to obtaining a yardstick beside which to measure the position of expenditure policy and then of the whole fiscal policy. Arpaia and Turrini (2012) opine that judging whether expenditure policy is expansionary or contractionary requires some insight about how a neutral expenditure policy would look like. However, whilst there is broad agreement that a neutral revenue policy is such that government revenues move together with output in a ratio relying on structural factors such as the degree of progression of the tax system and the

responsiveness of the diverse tax bases with respect to output (the output elasticity of revenues), no clear apriori exists for what concerns expenditure policy.

Buti and Van den Noord (2013) opined a definition of neutral expenditure policy according to which primary public expenditures grow in respect with potential output plus expected inflation. Fatas et al. (2012) and Hughes-Hallet et al. (2012) resolve to three various definitions of neutral fiscal policy: government spending is held constant in volume terms; government expenditures grow in respect with revenues; government expenditures grow in proportion with trend GDP. Moreover,Gali and Perotti (2013), among others, observe a broader concept of non-discretionary fiscal policy, derived as the residual of an estimated fiscal reaction function where the primary cyclically-adjusted budget balance is regressed against its own lag, the lagged debt/GDP ratio and a measure of the output gap.

2.1.3 The Role of Public Expenditure

Public expenditure is used for allocation, stabilization and distribution of resources (MUSGRAVE AND MUSGRAVE 1989).The allocation function becomes necessary to provide both private and in particular, social goods in appropriate mix with available resources. Due to distinct characteristics of goods (externalities, spillover, non- excludability/joint consumption, non rivalries) they would not be provided at all, or where they are produced the output will be inadequate and immoderately costly if left in the hands of private sectors, the government intervenes using the tool of public expenditure and other fiscal policy tools.

According to Omoruyi (2013) stabilization function of public spending is that of maintaining high employment, a reasonable way of stability of price an suitable rate of economic growth, with allowance for effect on trade and on balance of payment. That is the stabilization function is interested with the achievement by the national economy of capital utilization and full employment and at stable price, a good balance

of intervening action and a satisfactory rate of growth in per capita income over a time period.

2.1.4 Public Expenditure Policies in Nigeria

The Second National Development plan (1970-1974) consented a leading role to government just as it considered public enterprise as important to self reliance and growth due to structural defects in the private sector, capital scarcity, and perceived danger of foreign dominance of the private sector. The third National Development plan (1975-1980) supported some shift in resources delivery in favor of rural areas, which were said to have gained little from the economic growth of 1970s. Thus, small farmers and the rural population were made-up to benefit from public expenditure.

However, against the background of the austere fiscal outlook of the government, under the Third National Plan (1981- 1985), the duty of fiscal policy was seen mainly as the generation of revenue through increment of tax effort and the control of public spending. The introduction of structural adjustment programmed (SAP) in July 1986 acknowledged that the financial resources for public spending for the rest of the 1980s and beyond were expected to be less than what was previously anticipated. And given the vagueness in the oil market and substantial debt repayment falling due, there was need to manage government spending, particularly those concerning foreign exchange.

In the main, as with other World Bank and IMF programmers, measures were to be reserved to reduce government expenditure. Such steps, involve reduction of the growth of government wage bill; reduction in foods petroleum and petroleum products, government subsidies on fertilizer; limiting or adjourning new investments, and the justification, and therefore the transfer and commercialization of public enterprise, thereby proficiency of investment and expenditure control and administration. During the first National Rolling Plan (1990-1992), government

intention is to fight inflation hence budgetary deficit were to be shunned hence government expenditure was made more cost- effective and kept levels that were regularly occurring with the nations resources, realistic growth targets and general economic stability.

2.1.5 An Overview of The Nigerian Economic Growth

The Nigerian economy has had a truncated history. In 1960-70, the Gross Domestic Product (GDP) recorded 3.1 per cent growth yearly. Throughout the oil boom period, approximately 1970-78, GDP raised positively by 6.2 per cent yearly an extraordinary growth. Nevertheless, in the 1980s, GDP had negative growth rates. In the era 1988-1997 that institutes the period of structural adjustment and economic liberalization, the GDP reacted to economic modification policies and grew at a positive rate of 4.0. In the years after independence, manufacturing sectors and industry have positive growth rates apart from the era of 1980-1988 where manufacturing and industry increased negatively by - 3.2 per cent and - 2.9 per cent correspondingly. The growth of agriculture for the periods 1960-70 and 1970-78 was not satisfactory. Early in 1960s, the agricultural sector suffered from low commodity prices whereas the oil boom led to the negative growth of agriculture in the 1970s. The explosion in the oil sector enticed labor away from the rural sector to urban sectors.

The contributory role played by agriculture to GDP, which was 63 percent in 1960, dropped to 34 per cent in 1988, not because the industrial sector raised its share but due to negligence to the agricultural sector. It was thus not astonishing that by 1975, the economy had turn out to be a net importer of basic food items. The sure increase in manufacturing and industry from 1978 to 1988, was in line to happenings in the mining sub-sector, particularly petroleum. Capital formation in the economy has not been reasonable. Gross domestic investment as a percentage of GDP, which was 16.3 percent and 22.8 percent in the periods 1965-73 and 1973-80 respectively, decreased to almost 14 per cent in 1980-88 and increased to 18.2 percent in 1991 -98. Gross

National Saving was low and include mostly public savings specifically during 1973-80. The current account balances before official transfers are negative for 1965-73, 1980-88 and 1991-98.

The economy not once experienced double-digit inflation throughout 1960s. By 1976, nevertheless, the inflation rate was 23 percent. It reduced to 11.8 percent in 1979 and increased to 41 percent and 72.8 percent in 1989 and 1995, correspondingly. By 1998, the inflation rate had, yet, declined to 9.5 percent from 29.0 percent in 1996.

Unemployment rates averaged nearly 5 per cent for the era 1976-1998. However, the statistics especially on unemployment, must be explained with caution. Most people seeking for job do not use the labour exchanges, apart from the inherent misrepresentations in the country's labour market. Based on some basic indicators, it seems that the economy performed well during the years immediately after independence and into the oil boom years. However, in the 1980s the economy was in recession. The on-going economic reform programme is an avenue to put the economy on a recovery path with little inflation.The analysis that follows tries to discuss the developments in the economy for different periods.

2.1.6 The Sources of Economic Growth

As have be learned, there are two ways to model economic growth: (i)as a move to the right in its long-run aggregate supply curve, and (ii)as an outer shift in an economy production possibilities curve. In drawing either one at a time, we assume that the economy factors of production and its technology are not changed. Both curves will be shifted if these are changed. Therefore, anything that increases the quality or quantity of factors of production or that cause improvement in the technology available to the economy add to economic growth.

The sources of the U.S. economic growth in the 20th century were presented in the chapter on choices in production. There we learned that the main sources of the

United States growth from 1960 to 2007 were split between increases in the quantities of labour and of physical capital (about 65%) and there is increase in the qualities of the factors of production and technology (about 35%). Since 2000, the contributions from the increment in factor quality and technology have justified about half of the United States economic growth.

In a bid to commit resources to increase physical and human capital and to improve technology, activities that would improve future production, society must refrain from using them now to produce consumer goods. Even though people in the country would enjoy a higher living standard today without this sacrifice, they are ready to cut present consumption so that they would have more goods and services available for the future. As a college student, you made such a choice.

You chose to commit time to study that you could have spent earning income. You could enjoy greater consumption today, with the higher income. You decided this because you expect to earn higher income in the future and enjoy greater consumption in the future. Because other people in the society also choose to gain more education, resources are allocated to produce education by society. The education produced today would improve the society human capital and its economic growth.

All things been equal, higher saving permits more resources to be committed to increase in physical and human capital and technological advancement. In other words, saving, which means income not spent on consumption, raises economic growth by making readily resources that can be channeled into growth-enhancing uses.

2.1.7 Public Debt and the Nigerian Economy

This is the accumulation of government total borrowing from either the private sector of the country or from abroad, (Maku, 2013). Government debt through deviations in

the volume could be used to normalize the economy, composition, and payment of such debt, (Bhatia 2013). Total liquidity in the economy would be reduced by a long-term maturity composition of public debt whilst in reverse direction, a short-term maturity will increase liquidity. Public debt is used as a crucial tool by the government to regulate exchange rate, inflation, etc. since it forms a major part of the total credit supply to the country. A crucial alternative source of borrowing is public debt. The most suitable way of public borrowing depends on the reason for which the fund will be used and the prerequisite the funds are subjected to. According to Anyafo (2013), government sometimes borrows internally to fund capital expenditure programmes and this statement will be used for this study as internal debt would form part of the model.

2.1.8 Determinant of Economic Growth

Determinants of economic growth are inter-related elements that have sway the rate of economic growth i.e. rise in real GDP of an economy. There are six key elements of growth. Four are typically classified under supply factors which include human resources, natural resources, capital goods and technology. The other two are demand and efficiency factors.

1) Supply Factors

These factors affect the value of goods and services supplied in a country.

i)Natural Resources: Natural resources comprise everything that exists in nature and which has useable economic value. Rate of economic growth rises in quantity and quality of natural resources. Examples of natural resources which can have real effect on rate of economic growth include valuable metals, oceans, wild life and fossil fuels.

ii)Human Resources: Human resources include unskilled and skilled workforce. Increase in the quantity and quality of the workforce speeds up rate of economic growth. Here, increase in quality refers to enhancement of skills the workers have.

When the workforce are much, more goods and services are been produced and when more skilled workers do a job, they produce goods and services of high value.

iii)Capital Goods: Capital goods are tangible assets such as plant and machinery that can carry out processes which result in the production of other goods and services. Capital goods demand big investments at first but they enhance production and growth rate in future periods.

iv)Technology: Technology includes procedures and methods adopted to produce various goods and services. By investing in research, new technology may be invented or current technology may be improved gradually. Better techniques once devised, allow faster production and enhance the rate of economic growth.

2) Demand Factor:

The increased supply of goods and services caused by the supply factors must be sustained by increased demand for goods and services in the economy.

3) Efficiency Factor: Efficiency help to achieving high output to input ratio. Efficiency includes both productive and allocative efficiency. High efficiency enhances growth rate when it is connected with full employment. To achieve higher growth rate, a country must use its available resources in the cheapest way to produce the optimum mix of goods and services and it resources must be used to the maximum extent possible.

4) Growth in Per Capita Income:

Rises in the national income of countries have been found to be responsible for the increasing spate of public expenditure. This was derived from the Wagners law of increasing state activities. As the national income increases the government spends more to be able to meet up with the demands of the people.

The increase in per capita income, seen in historical context, records the growth of the economy from agricultural and low-income state to an industrial and high income

state. As the economy grows and income increases, the demand for goods, including public goods would increase, which as a result, pushes the public expenditure (government purchases) up.

With increase in per capita income, government provision of consumer goods also increase. A smaller share of consumer income is spent on certain goods, such as food or work clothing, and a higher share on others. As average income rises, same changes in the consumption pattern for the economy as a whole may be expected to occur.

The relationship is more observable with regard to public provision for capital goods. In the earliest stages of economic development, a particular need exists for the creation of overhead capital, such as shelter, roads, airports, power installations, etc (Musgrave and Musgrave, 1989). Most of these items are such that the benefits are largely external, or they require large sums of capital, the returns on which are spread over a long period of time, and thus do not lend themselves for private provision. This is the reason to expect that the public share in the provision for capital goods should be larger at the earlier stages of growth. As these basic facilities are built up and capital markets develop, the path is cleared for capital formation of the manufacturing sector to go into place and for industrial development in the private sector to occur.

5 Population Change

Population changes may also be a major factor of the public expenditure share. Changes in the rate of population growth generate changes in age distribution, and this trend is reflected in expenditures for education as well as care for the aged. The growth of population has frequently been cited as a factor that assists to the growth of public spending. Changes in the general population might affect some services, such as defence, police protection or fire protection, whereas in other cases it is a specific sector of the population that is of importance to the provision of the service, for example the school-age population in the case of education.

Population size and other population characteristics such as population density and age structure can be thought of as a subset of the environmental variables influencing the size of public expenditure. Intuitively, it would be expected that as population increases, then the level of activity produced by the public sector would have to expand in order to serve the larger population (Nurudeen and Usman, 2013). As an example, as the number of children of school age expands, the number of teachers and other inputs in the education process increase also if existing class sizes and other service conditions are to be maintained with the new larger population. These increases in the derived demand for total inputs are reflected as a rise in total expenditure in the public sector budget.

The nature of the connection between population size and the public expenditure rely on the nature of the good or service that is being supplied. Thus, in the case of a pure public good, the marginal social cost of an additional member to the population is by definition zero; and there is no reason to expect, for pure public good case, that a rise in population will result in a rise in expenditure.

6) Relative Costs of Public Services

Inflation In discussing the rising ratio of expenditures to GDP, it is important to note that the cost of public services has increased relative to that of private goods. This increase, especially in recent times, may have reflected differential rates of inflation. The more rapid rate of inflation in the price of inputs or goods procured by the public sector resulted in an increase in the nominal expenditure-to-GDP ratio ahead of that recorded by the deflated ratio.

Public services will become more costly, but it does not follow that the share of public expenditure for GDP must rise. As the relevant price of public goods increases, consumers will substitute private goods. The outcome will depend on the elasticity of

demand for public and private goods. Only if demand is inelastic can we predict that the public share will increase.

2.1.9 Influence of Gross Domestic Product on Capital Expenditure

Gross Domestic Product can also impact capital expenditure. Adolph Wagners law of increasing state activity explains it by stating that as the economy develops overtime, the activities and functions of government increases, (Wagner, 1890). This law says that growth in the economy stems public sector expenditures to expand. The law further insinuate that public expenditures are endogenous to economic development.

In general terms, past capital projects maintained plus new ones that will add to the economy are established in order to improve more on the economy, Odedukon (2013). Abandonment of projects cause set-backs in the economy as problems such as wastes, unemployment and so on occurs, (Abu and Abdullahi, 2013). Insecurity also evident as street urchins, kidnappers and armed robbers uses different abandoned government project (building) as their meeting place to carry out their wicked activities. So, a growing economy can improve the lots of capital expenditure projects in such economy.

The work thus uses the two-stage technique of estimation to examine the impact of capital expenditure on the economy since there is a simultaneous relationship between the economy and capital expenditure due to the argument above.

2.1.10 General Administrative Expenditure

In Nigeria, costs attributed with the running of the government have risen extensively over the years in a way that an increasingly declined proportion of public revenue is sufficient to support and implement government primary functions (CBN, 2016). Consequently, government key purposes have been hampered. A point of departure is

to consider how the federal Government budget is strictly divided between recurrent and capital spending whilst recurrent expenditure as a percentage of total government spending was 79.22% at the beginning of the 1970s, it has declined to 43.03% by the end of the 1970s. It increase to 49.30 by the end of the second Republic in 1983, further rose to 63.36% by the end of the 1980s. The dramatic increase in export earnings due to the oil boom of the 1970s evident in the decline in the proportion of the budget distributed to recurrent expenditure. Similarly, the rapid fall in the price of crude oil in the early 1980s equally increased the proportion of the budget allocated to recurrent expenditure.

Although the budget allocated to recurrent expenditure recorded a decline in proportion, from 60.10% in 1990 to 36.56% in 1998, it has since increased to 80.29% in 2003. The reason for using recurrent expenditure as a percentage of total budget as a crucial indicator of the cost of governance came from the belief that capital expenditure impacts more positively on the economy in respect to investment, employment and other growth-instigating activities (Adewole and Osabuohien, 2013).

General administrative expenditure as a percentage of gross domestic product (GDP) was very high as 8.72% in 1977 but declined to an all time low of 2.04% in 2002. According to Adewole and Osabuohien (2013), if we assumed that government administrative expenditure supports the GDP of any given society, then an administrative expenditure of almost 9 kobo went into the production of N1 worth of goods and services for the period of 1977 to 2002. Over the succeeding years, the administration costs of producing N1 worth of goods and services declined to 2 kobo in 1989. It increased to 4 kobo in 1999 and then to 7 kobo in 2002. According to Haber (2004), much of the high costs of governance are mainly due to the failure of institutional structures that direct attention away from predation to production. When the state primary function is essentially redistributive or predatory, productive activities become insignificant as a driving force of economic activities. It is against

this background that this empirical work is motivated to ascertain the effects of the persistent rise in costs of governance on economic development in Nigeria.

2.1.11 The Cost of Governance

The cost of governance is the money spend on administrative processes. It is also known as general administration or administrative expenditure. Adewole and Osabuohien (2013) decomposed cost of governance into two: recurrent administrative expenses and capital administrative expenses. They posit cost of governance as costs attributed to running of government. In other words, these are costs incurred by the government in running her affairs. The government provide help to maintain the social contract that ties every member of the state.

Similarly, Fluvian (2013) defined cost of governance as any expenses in sustaining government administrative structures. He also equals cost of governance to total administrative expenditure, which is a part of total federal government expenditure in Nigeria. He said that the reason for using total administrative expenditure as cost of governance descend from the fact that administrative expenditures are incurred in governing processes. According to Drucker (2012), cost of governance is public budget distributed to both capital and recurrent expenditures on sustaining government administrative structures, which looks to be very massive in Africa. The question of effectiveness in governance is therefore, to make ensure that public funds are spent judiciously, whilst public goods and services are provided for, sufficiently. The allocation of Public goods and services in Nigeria is upon the principle of equity.

When the market is allowed to be the principal mechanism for resource allocation, natural and human resources may skew income distribution in favour of endowed groups. Therefore, free markets are more likely to be impeded when pronounced disparities exist in the allocation of natural and human capital endowments among groups that exist in a particular society. This highly explains why the nationalists of northern extraction did not agree earlier with the idea of independence in Nigeria,

since their limited investment in human capital would put them at a disadvantage in a post - independent Nigeria (Adewole and Osabudien, 2013). Nigeria, therefore, put up a political arrangement that make sure that the commanding heights of the economy were left in the control of the public sector. With the benefit of hind sight, it could be said that this arrangement signaled the beginning of patronize activities that interrupted the market and productivity, promoted rent seeking, brought an imbalance between rewards and efforts, and increased the cost of governance in Nigeria. Cost of governance, as said by Afolugbo (2013), is therefore the cost incurred in running the government. It is the cost of performing political duties, and discharging civil services to the public.

2.1.12 Rising Cost of Governance in Nigeria

Governance represents more than ways of providing common good, as it can be related to the government capacity to help the citizens to achieve individual satisfaction and material prosperity. Therefore, governance could be compared to the management, supply and delivery of public services to a nation. According to Fluvian (2013), there are specific factors responsible for the rising cost of governance in Africa. First, there is the problem of inflation. The costs of public projects are unduly inflated by corrupt politicians. There should be equity. Adewole and Osabuohien (2013) also said that the rising cost of governance in Nigeria is a price we have to pay for undue consideration for equity. Similarly, the problem of misappropriation of public funds is another cause of the rising cost of governance in Nigeria (Warimen, 2014). Political leaders increase the costs of public projects to embellish themselves. Adewole and Osabuohien (2013) also said that the supply of security beyond the optimal level will lead to limited prosperity. In other words, the excessive money spent by government on a particular set goods affects development, since resources are scarce and should be optimally utilized.

Furthermore, there is population increase. A population increase implies that there is pressure in the limited available the resources. Fluvian (2013) also said that increase in population implies that more demand for public goods and services, such as education, health services, etc. the need to give every ethnic group adequate representation is another reason for increasing cost of governance. Another major cause of the continous rise in cost of governance in Africa vis-a - vis Nigeria is the extra-large civil service sector. This has been described as an institutional factor by Afolugbo, et al (2013). Most public workers in Africa are redundant due to employment of excessive workforce to reduce unemployment. Employees are more than the optimal size, which led to inefficiency and unnecessary increase in cost.

2.1.13 Defence Expenditure

Military expenditure is said to be total financial resources applied by governments to create and maintain the national military (defence) establishment, peace and war. Therefore, defence expenditure is important in public budgets of all countries because defence sector is a major user of scarce resources. Although, there have been agitations for reduction in defence spending in recent years, most developed and developing countries in the last decade have high defence expenditures, implying the sacrifice of civil expenditures. In the views of Akpan(2014), developing economies are faced with increase size of government operations. This is particularly true of defence sector. Certainly, the past three decades have witnessed an alarming increase in defence expenditures in Nigerian. This situation has reduced the developmental needs of other sectors. Budgeting for defence in relations of the desire to adequately equip the defence sector and ensure a sustainable economic growth in Nigeria is of paramount interest to the government. Through defence expenditure, government protects the economy against external aggression and enhances the stability required for economic growth and development. Besides, defence expenditure adds to societal welfare.

In Nigerian context, there have been several modifications in the presentation of the Ministry of Defences breakdown of expenditure. For example; the departments that makes up defence sector includes ministry of defence, defence headquarters, Nigerian army, Nigerian navy, the Nigerian air force, Nigerian defence academy, national defence college, armed forces staff college, Nigerian armed forces rehabilitation centre, defence intelligence agency, military pension board, defence intelligence military school and defence industry corporation of Nigeria (Federal Ministry of Finance (FMF), 2012). The breakdown of the Nigerian defence sector showed that both IMF and NATO definitions of defence expenditure exclude some unique features. While defence in IMF excludes military pension personnel, that of NATO excluded civilian personnel on pension. These excludes, are taken into consideration for the defence sector in Nigeria. The definition of what constitute military expenditure is unique and relative from one country to another. Statistically, defence expenditure in Nigeria which was N538.2 million in 1970 (in nominal terms) increased rapidly to N3.206 million in 1980 and later rose to N3.939 million and 12.169 million in 1994 respectively. In 1998, the expenditure on defence was about N23.08 million and rose to N111, 868 in 2005.

The structure of defence expenditure which comprises of recurrent and capital expenditures has been sustained. For example, defence recurrent expenditure was N88, 053 million while capital expenditure was N22, 093 million in 2002. In 2006, both defence recurrent and capital expenditures fell to N83,674.0 million and N14,636.0 but rose to N102,597.27 million and N144,17.24 million for 2007 respectively (CBN statistical bulletin, 2016). Although defence expenditure has been fluctuating there has been a rapid upward swing. High military expenditure would cause developmental failure and have a negative effect on economic growth (Na Huo,2014).

2.1.14 Personnel Costs for the Armed Forces

This group includes the army, the navy, and air force staff as well as Nigerian Defence Academy (NDA) cadets, defence advisers, defence operations, staff of Nigerian armed forces resettlement centre, Armed Forces Staff College and the C.130 crash victims scholarship, staff of national defence college.

2.1.15 Personnel Costs for the Civilian Staff

This section includes the civilian academic and non academic staff of NDA, civilian staff of the national defence college and civilian medical and paramedical personnel, other civilians both senior and junior staff under the different departments of the ministry in which they serve the ministers officer, finance and supplies, personnel management, services departments, inter- services departments, planning, research and statistics departments and armed forces school management board.

2.1.16 Overhead Cost.

This group includes the costs of operations and maintenance and not yet disaggregated for public information. Operation costs are approximately the same as under the corresponding category in the UNO definition apart from the exclusion of terms relating to pensions and benefits - which is handed by the directorate of military pensions in Nigeria while the civilian staff of the ministry of defence are grouped with the civil servants of other ministries. Hitherto, according to Nigeria budget procedures, the pensions and benefits of all public servants, are charged to the consolidated revenue fund. Pensions and benefits for military personnel are not budgeted under the minister instead the benefits and pensions of ex-service men comes under a separate expenditure category.

Under The capital expenditure budget of the ministry of defence, there are numbers of defence related items or components which includes.

1) Capital project on defence
2) Defence industrial corporations
3) Purchases of vehicles and equipment for all the armed services

4) The construction of military infrastructure such as barracks, care and maintenance of projects, provision of roads, electricity, hospital and water of barracks and bases.
5) Development of training institutions
6) Equipment assemblies
7) Naval dockyard projects and
8) Air beetle simulation projects
9) Outstanding bills on equipment procurement and other capital projects.

Thus, the capital expenditure section of the ministry of defence budget corresponds to UNOs section on procurement and construction. Research and Development (R&d) do not exist as a separate expenditure category in the Nigeria defence budget.
Institutions directed toward advanced research in Military matters include, the NDA-the university of the armed forces, the national defence college and Defence Industrial Corporation (DICON). The Nigerian defence expenditure is structured accordance to the United Nations Organization (UNO) and Stockholm International Peace Research Institute (SIPRI) classifications.

However, in the approved budget of the Federal Government, The budget office approved two different sections of the defence expenditure namely: (i) recurrent expenditure; and (ii) capital expenditure. The recurrent expenditure involves personnel costs for the armed forces (the army, the navy and air force). Added to this category is the costs of operations and/ barrack rehabilitation. These operation costs are approximately the same as under the corresponding UNO categorization. On one hand, capital defence expenditure consist of funds allocated for the purchase of fixed assets such as military hardware and vehicles, construction of barracks, and other infrastructure; care and maintenance projects, provision of roads, electricity, hospitals and water for barracks, provision of projects like air beetle simulation. Thus, the capital expenditure section of the defence expenditure corresponds to the procurement, construction section of the UNO. R&D is also captured in capital

defence expenditure. Depending on the nature of society's social welfare function, as reflected in government preference and in terms of public choice, there may be a tendency to overstate or under-report on defence expenditure. In addition, is the problem of corruption in the military and the society at large, and the contamination of economic data by the political framework within which defence decisions are taken.

2.1.17 Macroeconomic Impact of Defence Expenditure

In most developed and developing countries defence spending is a important claim on public resources. There are different opinions, theories and evidences regarding the repercussion of defence expenditures. Adam Smith (1776) in his popular work An Inquiry into the wealth of nations opined that defence expenditures should be the first duty of any government as it seeks to protect and preserve its society from violence and invasion of other independent societies. He further maintained that defence sector expenditure is a remarkable one, such that it does not necessarily require considered opinion by the majority of the citizens as to what level of defence expenditure is needed in a particular situation. However, he was quick to conclude that defence expenditure does not yield any productive resources.

Defence expenditure gained much prominence when Benoit (2012) conducted a study on defence expenditure and economic growth covering 44 countries. Beniot had identified a number of positive and negative channels through which defence expenditure impacted on economic growth .The study suggests the transfer of massive resources away from investment to defence sector. He showed that defence expenditure impacted to the civilian economics by feeding, clothing and housing a number of people who would otherwise have to be fed, housed and clothed by the civil economy, provision of education and medical care as well as vocational and technical training, engaging in a variety of communication network that serves the civilian uses, engaging in scientific and technical specialties such as hydrographic

studies, mapping, aerial survey, dredging, meteorology, border guard and disaster relief which would otherwise have to be performed by civilian personal. Military forces also engaged in certain research and development (R&D) and production activities which diffuse skills to the civilian economy and engage in or finance self help projects producing certain manufactured items forcombined civilian and military use which might not be economically produced solely for civilian demand (Benoit, 2012). This exposure has not only suggested that defenceexpenditure is a viable economic injector for growth but has opened an avenue for a series of debatable works.

2.1.18 Education Expenditure

The importance of increasing education in any economy cannot be over emphasized. Investment in education and training is essential to drive any economy to higher level of productivity and hasten the rate of economic growth.

Education raises the number of knowledgeable workers by enhancing their skills and preparing them adequately for new challenges. More so, education enhances occupational mobility, lowers the level of unemployment in the economy raises the earning capacity and productivity of the countrys work force, better access to health information which will increase life expectancy and, at the same time manage the fertility rate. Therefore, education has the capability of improving the thorough production of goods and services by ensuring efficient screening whereby the best people are picked and made available for the world of research.

Public education expenditures have been given recognition as a key aspect of fiscal outlays in most developing countries of the world. This is mainly because education and human capital have been found to have positive and significant impact on economic growth. Education reduces fertility rates, improves health, and enhances social and political participation.

2.1.19 Federal Government Expenditures on Education

Federal Government expenditures on education are below 10 percent of its overall expenditures. Table 1 presents these shares, and differently for recurrent and capital expenditures, based on actual expenditures between 1997 and 2000 and on estimates for 2001 and 2002. Overall, the shares have changed between 9.9 and 7.6 percent and the trend has been highly downward. Typically, between 70 and 80 percent of expenditures are for recurrent activities. However, in 2000, the capital share was raised to 45 percent of the total, in line with the overall huge increase in capital expenditure in the Federal Governments budget.

As described above, while each tier of education has at various times been the concurrent (joint)responsibility of both Federal and state governments, the former has historically been much more involved at the post secondary level.

Federal Government recurrent and capital expenditures by level of education between 1996 and 2002. Over the period, the allocation for the (24) Federal universities has changed roughly between 40 and 50 percent of total Federal expenditures, whilst those for the (20) colleges of education and (16) polytechnics have remained fairly constant (apart from one year) at around 17 percent and 11 percent respectively.
Altogether, during the overall period, the tertiary education sub sector has received between 68 percent and 80 percent of the total Federal expenditures for education. In five out of the seven years, the money allocated to secondary education has been above that of primary. The average shares have been 14.5 percent for secondary school and 11.5 percent for primary school. Federal government spending on secondary school are essentially for the federal government colleges (unity schools), normally three of which are established in each state (80 in total so far) and the 16 federal secondary technical colleges.

Primary schools allocations have been more ad hoc resulted from specific initiatives. In the last three years, most have been for the renovation of three classroom blocks and classroom construction in each of the local government authority. Federal polytechnics and colleges of education allocations have been much below those requested by the respective Boards. This data are only avail to 1996 but in that year, polytechnics received 47 percent of the requested recurrent budget and 55 percent of the capital request (Udeh, 2013). Allocations for colleges of education were 45 percent and 22 percent of the requests respectively. The extent to which this represents underfunding or bloated requests is unknown but it does indicate that the budgeting process lacks incentives for rational allocations.

2.1.20 State Government Expenditures on Education

The combined capital and recurrent development expenditures of all state governments total around only one fifth of those made by the Federal government. The revenues of state governments are dominated by the distributions from the Federation Account plus, more recently, receipts from the centrally collected value added tax. Internally generated revenues lies between 20 and 25 percent of total state revenues between 1995 and 2000. Lagos and Rivers States which raise around half of their total revenues, and Delta State which raises around one third, were the only exceptions. State governments are involved in the funding of all the levels of education, though to different degrees. Primary education is highly financed through local government revenues whilst the Federal Government gives attention to three-quarters of its expenditures in post-secondary education. State governments in practice fund most of secondary education and often a significant part of post-secondary education, in addition to relatively small amounts for primary school. Though varying considerably, the portion of total state expenditure devoted to education display a disturbing picture in a number of ways. First, the median share in 1999 was only 18.0 percent that looks to be low for this level of government. Further, in every state for which there is time series data for over two years, the portion for

education has fallen, apart from in Niger where the shares appear to have been very erratic, and in Kano where the share is low. In the this research work, post secondary education is divided between universities on the one hand and polytechnics, colleges of education and state technical colleges (labeled tertiary) on the other. On average around two thirds of all state government spending on education are for secondary schooling, while the average for primary schooling is around 11 percent (though the range looks to be very wide). The shares for tertiary and university education combined vary substantially with a range of between 13 percent and 40 percent. On average, states spend around 19 percent of their total educational expenditures on tertiary education and those which also have state university statutory allocations from the Federation Account; proceeds of the centrally collected value added tax and internally generated revenue. In accordance to the revised estimates for 1999, across all local governments only 7.7 percent of the total N60,800 million revenues were generated internally, while 15.7 percent came from value added tax and 76.6 percent from statutory allocations (Central Bank of Nigeria, Survey of Local Government Councils). Local governments essentially fund the salaries of primary school teachers. In 1999, the sum deducted from source made for primary education from the local governments allocation of the Federation Account and allocated to NPEC for onward transmission to the SPEBs, totaled N 25,422 million or 42 percent of total local government revenues (NPEC data sheets and Central Bank). Aggregating all local governments within the state, this share ranged from 20 percent to 95 percent implying enormous disputes in the burden between local governments and states resulting from this single responsibility. Again the pattern is varied. In Borno, the share for most of the period of the statutory allocations being deducted for salaries was relatively low, as it was in Kano. In states such as Oyo and Enugu, however, where education is spread widely, the burden has been more higher. Rivers is a special case in that recent changes in the derivation aspects of the Federation Account distribution formula have been to its advantage and the portion of local government revenues required for teachers' salaries fell. In 1999, the shares being deducted

increased considerably in most states following a rise in teacher salaries initiated by the Federal government. Even then, considerably, some specific grants and loans (N 21 billion) had to be distributed to the SPEBs by the Federal Government within January and September to compensate. Additional large increases in salaries were awarded in 2000. By the year end 2001, several local governments were receiving no payments from the Federation Account as the deductions for teachers' salaries equaled or were greater than their allocations.

2.1.21 Unit public Cost By Level of Education

Due to the tendency of some state governments to inflate primary school enrolments, the (consequently depressed) unit cost estimates at this level need to be viewed with particular caution. Unit costs in post-secondary institutions are more diverse. Across all the 24 Federal universities the average is N 23,414 (Hartnett, 2000). The public costs of the state universities appear to be a little lower, and in the case of Enugu much lower due to very high rates of cost recovery. Unit costs of the teacher training institutions and polytechnics seem to vary considerably across states.

2.1.22 Household Expenditures

Part of this study focuses on government expenditures on education. However, education is hardly a (financially) costless activity to the student or household, even when the child attends government school at which no tuition fees are charged. The consultants collected information on household costs of attendance at both government and private schools. As in the case across the whole of the reports, there was significant variation in the quality and coverage of the attempts. Most involved some form of survey. The data on household expenditures generally covered educational materials, clothing, meals and transportation, even fees and/or other charges. However, whilst the estimated costs of the non-fee/charge items formed a large share of household expenditures in schooling, the estimates were particularly subjective.

2.1.23 Health Expenditure

Health provision is seen as a major element of policy to promote broad economic growth. The issue of diseases such as HIV/AIDS is notable to retard economic growth of developing countries. Hence, every country commit large public fund to healthcare provision believing that it would enhance the health of the citizenry so that they can contribute meaningfully to the growth and development of the economy.

2.1.24 Governance and Health Outcome

On the topic of the connection between governance and health outcome, Kaufmann et al. (2012) and Kaufman et al. (2013), show that governance indicators such as voice, accountability, political stability and violence, government effectiveness and graft among others, have a strong direct negative effect on infant mortality. Of same view, Gupta et al. (2008) find that countries with high corruption have high child and infant mortality rates. La Croix and Delavallade (2014) find that countries with high corruption invest more in housing and physical capital in comparison with health and education with the associated rent seeking in physical capital which hinderers economic growth. RajkumarandSwaroop (2013), while adding to the debate, explain that public spending often, does not yield the expected improvement in outcomes and that the variances in the efficacy of public spending can be highly explained by the quality of governance. Overall, the empirical evidence have highly supported the poor link between public health care spending and health outcomes on one hand, as well as poor link between governance and development outcomes on the other hand especially in developing countries.

2.2 Theoretical Literature

2.2.1 Theories of Public Expenditure and Economic Growth.

Economic theory has revealed how government spending may either be advantageous or harmful to economic growth. This section pin points same basic theories that have

been used in support of the effects of government expenditure on economic growth. Such theories amidst others are:

1 Musgrave Theory of Public Expenditure Growth

This theory was formed by Musgrave as he observed variations in the income elasticity of demand for public services in three series of per capita income. He says that at reduced levels of per capita income, demand for public services likely to be very low, this is so reason being, to him such income is committed to satisfy primary needs and that when per capita income begins to increase above these levels of low income, the demand for services supplied by the public sector such as education and transport, health starts to increase, thereby compelling government to raise expenditure on them. He noted that at a high level of per capita income, typically of developed economy, the rate of public sector growth likely to drop as the more basic needs are being met.

2 The Wagner's Law/ Theory of Increasing State Activities

Wagner's law was principally named after the German economist Adolph Wagner (1835-1917). Wagner furnished his law of rising public expenditures by ascertaining tendency in the growth of public expenditure and in the size of public sector. Wagners law claims that: (i) the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry; (ii) the extension of the functions of the states leads to an increase in public expenditure on administration and regulation of the economy (iii) the increase in public expenditure would be more than proportional rise in the national income (income elastic wants) and will thus result in a releant expansion of the public sector. Musgrave and Musgrave (1989), in favour of Wagners law, posit that as advance nations industrialize, the portion of the public sector in the national economy grows perpetually. It is usually suggested that the net impact on growth of government spending (as measured by aggregate output) of the

crowding-out effect of public expenditure clearly relies on the relative marginal productivity of the public and private sectors. The external relationship of public expenditure improves growth by increasing private sector productivity. A higher level of this kind of expenditure can achieve a high growth rate. The opposite natures of the crowding-out and external effects rest on the suggestion that the structure of public expenditure, rather than entirely its level, would be of significant importance.

3 The Keynesian Expenditure Theory

Amongst all economists that discussed the relationship between public expenditures and economic growth, Keynes was among the most notable with his clearly contrasting view on this relation. He esteems public expenditures as an exogenous factor which can be used as a policy tools to promote economic growth. From the Keynesian thought, public expenditure can positively contribute immensely to economic growth. Therefore, an increment in the government consumption is tend to lead to an increase in profitability, employment and investment through multiplier effects on aggregate demand. Consequently, government expenditure increases the aggregate demand, which induces an increased output relying on expenditure multipliers. Furthermore in Keynesian macroeconomics, various types of public expenditures, can positively contribute to economic growth via multiplier effects on aggregate demand. In other fold, government consumption may crowd out private investment, deaden economic response in the short run and decrease capital accumulation in the long run. Studies based on endogenous growth models differentiate between distortionary or non-distortionary taxation and productive or unproductive expenditures. Expenditures are categorized as productive if they are included as arguments in private production functions and unproductive if they are not (Barro and Sala-I-Martin,2010).

4 The Solow Swan's Expenditure Theory

The Solows model was introduced by Robert Solow and T.W. Swan in 1956. Their model is also known as Solow-Swan model or simply Solow model. In Solows model, other things being equal, population growth and rates are crucial factors of economic growth. Saving/investment in higher rates would lead to accumulation of more capital per worker and therefore, more output per worker. In another view, high population growth has a negative relationship on economic growth clearly because a higher fraction of saving in economies with high population growth has to go to keep the capital-labour ratio constant. In the epileptic state of change in technological & innovation, an increase in capital per worker would not be suitable by a proportionate increase in output per worker due to diminishing returns. Therefore, capital deepening would reduce the level of return on capital.

5 The Endogenous Growth Theory

The basic enhancement of endogenous growth theory over the previous models is that it specifically tries to model technology (it seem to look into the determinants of technology) rather than presuming it to be exogenous. Mostly, technological progress brings about economic growth, which is basically the ability of an economic organization to use its productive resources more efficiently over time. Much of this capability originates from the process of learning how to operate newly made production facilities in a more productive way or generally from learning to adopt with speedy changes in the structure of production which industrial progress must entail (Verbeck, 2012).

2.2.2 Peacock and Wisemans Theory of Expenditure

Peacock and Wisemans work is perhaps one of the best renowned analyses of the time pattern of public expenditures. They founded their analyses upon a political theory of public determination namely that governments like to spend more money and citizens do not like to pay taxes, and that government wish to focus on the wishes of their

citizens. They both saw taxation as setting a limitation on government expenditure. As the economy incomes grew, tax revenue at unchanged tax rate would increase, by it rendering public expenditure show a stepwise upward inclination even although within the economy there may be a disagreement between what people observed as suitable level of public expenditure and the desirable level of taxation. During the era of social disruption nevertheless, this stepwise upward inclination in public expenditure would face distress.

These eras would correspond with famine, war or some large-scale social catastrophe that would demand a speedy rise in public expenditures; the government would be compelled to increase taxation levies. The increasingly taxation levels would, though, regarded as acceptable to the people during the era of crisis. This is referred to by Peacock and Wiseman as the displacement effect. Public expenditure was moved to the up parts and for the period of the crisis displaced private for public expenditure does not fall to its initial level.

A war is not paid for from taxation; and no nation has such huge taxable capacity to do so. Therefore, countries borrow and debt charges have to be paid not after the event. The imperfection effect thus, was another effect that they thought might operate. They suggestion arise from the people Keener awareness of social problems during the period of upheaval. The government thereby widens its domain of services to enhance these social requisites and because people understanding to endure levels of taxation do not return to its previous level, the government is well to do in funding these higher levels of expenditures deriving from the expanded domain of government and debt charges.

2.2.3 Economic Theory of the State and the Cost of Governance

The structure of government inherited at independence is largely a reflection of colonial influence. The colonial powers objectively separated the African continent so that nationally peoples who were not related were forced into political ceremony for the formation of a state (easterly and Levine, 2013) Colonial governments enacted

extracted institutions in places where weather that was not favourable had serious health repercussions for them and created European style institutions in places convenient for habitation (Afolugbo, et al, 2013).

Thus, dilute institutions, largely represented by growth embarrassing political structures, became the superior feature of resource rich multi- ethnic societies. Afolugbo, et al (2013) appended that the opportunistic ways of ethnic leaders, especially in a mineral-rich politically organized economy such as Nigeria, finally produced a government structure that had a negative lure on social and economic progress. According to Oriakhi (2012), a higher than best civil service, influenced mostly by that section of the country with notable human capital incompleteness is bound to increase governance costs and institutionalize the control for rent extraction. This is a key issue in Nigeria. Another institutional factor that raises cost of governance is the security provision by the state. For instance, a public good like law and order (security for short) has a high degree of public interest, upon which there is a large agreement that it could be less expensive if provided by government, especially by a central government, if we allow that in real live there is no pure public good, we should understand why profit- maximizing firms could equally furnish complementary security services. Nevertheless, government furnishes that bulk of security services. Thus, the part played by the private sector in the security sector is minimal. We recognize that the different levels of government would be able to organize security effectively. According to Adewole and Osabuohien (2013), the dilute of the centralization of security affects its efficiency and drives up cost of making security available. This model is carved mostly from the views provided by Fates, et al (2012). In canonical economic theory, the state is a product of cooperation. In other words, rational human who live within a defined territory discover a net gain in cooperation rather than in competition. It could be likened to a group of many perfectly competitive firms who form a collusive unit called a monopoly. From a political economy perspective, the state is the byproduct of rational individuals who

believe that state formation would be better than living as individual or families. The state, therefore, as being the governments instrument of operation, is a natural monopoly, for no two organizations with equal powers of force over a specific region can co-exist satisfyingly and uphold relative peace.

Lastly, the state is formed for the benefit of the people. It enables individuals to co-exist peacefully by avoiding violence and reducing tendency for communal and individual clashes. Fates, et al (2012) contributed that if stakeholders can shun the enticement to theft, or selfish reasons to extract rent, the state will prosper. Nevertheless, this is not like the case in Nigerian. Many stakeholders/politicians are pervert passive and selfish. They are good at stealing public treasury. Consequently, clear and pronounced poverty is a major feature of this type of society. For there to be growth and development, resources must be distributed moving in the line production.

2.2.5 Neoclassical Growth Theory — The Growth Accounting Theory

Growth theory is a crucial part of modern macroeconomics. The growth analysis has long been tied to the Solows (1956) growth accounting approach, also known as neoclassical growth theory, that has two vital predictions about growth in the long run: first, that the long-run growth rate is pushed by population growth; and second, that of the rate of technical progress. Solow (1956) and Swan (1956) Saw the aggregation of physical capital, attributed with a permanent reduction of technical progress, as the force of economic growth. The specific presumptions of the model are: diminishing marginal productivity of capital, constant returns to scale, exogenously determined technical progress and substitutability between capital and labour. Technological progress, however, is vital in the long-run, it is concidered as exogenous to the economic system and as such it is not properly examined by this model (Petrakos, et. al., 2013). In the standard neoclassical growth model, Increase in the capital, labour and the pace of technological progress are factors of economic growth.

The major consideration of growth theory is that in order to maintain a positive growth rate of output per capita in the long run, there must be consistent advances in technological knowhow in the form of new goods, new markets, or new processes, which was demonstrated by the neoclassical growth model which notes that if there were no technological progress, then the impact of diminishing returns would eventually cause economic growth to cease (Abu and Abdullahi, 2013). Public policies in general and public spending specifically, is said not to affect growth. In the extended Solow model, an important input to growth is human capital (Petrakos et. al., 2013). In the endogenous models, public policies can affect both technological progress and human capital formation and hence public policies can also have a relationship on economic growth. Endogenous growth models like those of King and Rebelo, (2012), on the view, predict that misrepresentation of taxation and productive expenditures do affect the long-run growth rate. The repercussions of endogenous growth models for fiscal policy have been specifically observed by Barro, (1990), Jones et. al., (1993), Stokey and Rebelo, (2012) and Mendoza et. al., (2010). In testing if the historical assertion supports the endogenous or the neoclassical growth model, many key challenges arise. One challenge is that, there may be limited data on government expenditures and revenues, specifically at the needed level of disaggregation, and the definition of specicfic expenditures as productive or unproductive, or specific taxes as distortionary or non-distortionary (Bleaney et. al., 2013). Recent literature on endogenous growth theory anticipates that fiscal policy changes can affect the long-term growth rate by controlling the factors of growth (physical and human capital, technological changes, employment and savings) (Modebe et. al., 2012). Judging by government expenditure, public educational and health expenditure are the two most important public expenditure items which can contribute to the structure of the human capital; and consequently, there is, in principle, a channel from government expenditure to economic growth. Changes in public expenditures and taxes can improve(or reduce) employment and human capital

aggregation and change investment externalities that then would have impacts on growth rate output.

This is in agreement with the fundamental neoclassical growth model, in situation where fiscal policy is not able to affect the long-term growth. The literature has documented the theoretical relationship between government expenditure and economic growth. There are two vital different theories in economics involving the relationship between government expenditure and economic growth. Whilst conventional macroeconomic theory has commonly presumed that increased government expenditure would lead to high aggregate demand and in turn, speedy economic growth, Wagnerian theory (1883), nevertheless, hangs near the opposite view. The recent context that a rise in national income leads to more government expenditure. The effect between government spending (to be proxy for government activity) and economic growth is not without strife in the empirical literature.

The theory of government expenditure cannot be debated without the mentioning of Wagner (1883) conversation on this. He said that there are inherent prepositions for the activities of diverse levels of government to increase both thoroughly and not thoroughly. He further maintained that there is a working relationship between the growth of an economy and government expenditure with the result that the government sector sprouts speedily than the economy. From the initial version of the theory it was not very clary whether Wagner was directing to growth in (i) proportion of public sector in the economy, (ii) the ratio of government expenditure to GDP, or (iii) absolute level of public expenditure (Bhatia, 2013). According to Wagner (1890), as quoted in Bleany et al, (2013), increased government activity and the corresponding rise in government spending is an unavoidable result of economic growth due to (i) as the society is growing richer, it requires the government to make available quality goods and services, and (ii) increased friction in society causing higher demand for government services, (ii) the demand for such goods and services is highly income elastic. Regularly known as Wagners law (1883), it states that demand for government services likely to increase as countries become richer (Maku,

2013). This is evident by the finding of a positive relation between government share and national income (Bleaney et. al., 2013). This indicates that change in national income can lead to change in government expenditure.

Nitti (1903) in his "PrincipidiScienzadelleFinanze" not only supported Wagner's law but also enunciated the theory with empirical evidence that the Law is applicable to all economy. He went down to history to explain that all governments, irrespective of the levels and types, intentions (whether peaceful or warlike), and size had shown the level of increasing public expenditure.

The long-run correlation between real output and public expenditure has given rise to considerable attention in economic research. Particularly, the capability of public expenditure to control national income is questioned in two levels. First, the nature of the causality pattern is not in agreement: most of public finance studies took to the Wagners law approach which states that national income leads to public expenditure, mostly through a rise in demand for public services. One of the rottenly cited stylized facts of public sector economics is that of Wagners Law about the long-run tendency for public expenditure to grow relatively to some national income aggregate such as GDP. In this case, the causality runs from national income to public expenditure. This means that public expenditure can be entreated as an outcome, or an endogenous factor, rather than a cause of growth in national income. Within this bracket, public expenditure is treated as a behavioural variable, same like private consumption. On another hand, Keynesian suggestions treat public expenditure as an exogenous determinant, which could be used as a policy tool. A number of macroeconomic models adopt, in which case, causality runs from public expenditure through domestic demand to national income. According to Sinha (2013), if the causality pattern were Wagnerian, public expenditure is delegated to a passive role, and if Keynesian it acquires the position of an important policy variable.

We should note that even if we exclude the possibility of a causality pattern running from national income to public expenditure, it is not quite clear that increased public

outlays will have lasting positive output effects. This is because the money funded deficits would cause positive output effects only if they remain unforeseen by the private sector. In alike manner, repeated and predictable monetary accommodation of deficits would result in a higher inflation rate without any long-run output gain. By resulting in a higher inflation rate, money-financed budget deficits could then mean real costs for the economy through the well-documented real costs of inflation. The four main hypotheses based on the correlation between government expenditure and revenue such as Tax-and-Spend hypothesis, Spend-and-Tax hypothesis, Fiscal harmonization and taxes and expenditure are not dependent of each other. The Tax and-Spend hypothesis implies that a change in government revenue is ensured by a change in government expenditure. Friedman (2011) and Buchanan and Wagner, (2010) have shown that a rise in government revenue causes a rise in government expenditure, nevertheless the Tax-and-Spend approach does not play any role in reducing budget deficit.

Secondly, the Spend-and-Tax hypothesis implies that a change in government expenditure is followed by a change in government revenue. Peacock and Wiseman, (2010) have proved that temporary increase in government expenditure due to emergency purposes that is temporary lead to rise in permanent increase in government taxes or other kinds of revenue. Barro (1990, 1992) has argued that the result suggested by Buchanan-Wagner on the relationship between government expenditure and tax due to fiscal misapprehension is not in existence. Barro (1992) has used the Ricardian equivalence proposition. According to Barro (1992), if government meets its expenditure through borrowing, then it results in a rise in tax liabilities in future. The third kind of relationship that may appear between these two variables is defined as Fiscal Synchronization hypothesis, which suggests that revenue and expenditure are determined simultaneously. This debate is mainly developed by Musgrave (1989) and Onakoya and Somole (2013). According to them, government spending and revenue are determined at the verge of equalizing marginal benefit to the marginal cost of government services by the populace of the country. The fourth

hypothesis as mentioned by Gemmell and Kneller, (2012) and highlighted by Sharma, (2012), relates to the institutional separation of the expenditure and revenue choices of the government. Here, on the basis of requirements expressed by the citizenry expenditure would be defined and revenue would depend on the maximum tax burden endured by the population. As a result, the accomplishment of fiscal equilibrium would only just be a matter of coincidence.

On another view, bond-financed public expenditure might include expansionary effects of a more lasting nature provided that the eagerness of future interest payments trancends positive wealth effects on current and future consumption (Blinder and Solow, 2012). However, such outcomes may be mitigated by crowing-out effects that could take place through two channels. First, via portfolio effects: an increase in the stock of bonds may bring about a similar rise in interest rates to sustain equilibrium in the bonds market. Such a rise may imply a movement of the LM curve (to the left), which could reduce the expansionary impact of the bond financed deficit. Secondly, through an upwards-sloping aggregate supply curve: given a sure level of nominal money, rising prices caused by a fiscal expansion would lead to a decrease in real money stock. That would cause a rise in interest rates and negative wealth effects decreasing private consumption and investment. By causing a rise in interest rates, bond-financed deficits may literally result in a severe inflation performance than money-financed deficits in the lines suggested by Sargent and Omoruyi, (2013). Finally, if the Ricardian Equivalence hypothesis valid, bond-financed budget deficit would have no expansionary effects at all (not even in the short-run).

The theory also debates the role of public expenditure as an output-promoting control variable as highlighted in the structure of the endogenous growth literature pioneered by the seminal papers by Cooray, (2013) and Loto, (2014). Endogenous growth models proof that the economy output is fettled not only on the level of physical capital and labour stock (as it was the case in Solows (1956) neoclassical growth model) but also on additional production factors which may enter the production function with constant returns to scale. Therefore, composition of public expenditure

is also an important issue, and if the purpose is to enhance growth, the focus should be put on the more productive items of the budget, even if the balance between the various functional items of the budget can change according to the distinguish circumstances and priorities of each country.

The advent of the class of growth models developed by Cooray ,(2013), Loto (2014), Barro, (1990) and Barro, (1992), which in essence constitute a new, endogenous growth theory, has caused that the view on the role of government in growth process changed. In accordance to this theory, both transition and steady state growth rates are endogenous, implying that also long-run economic growth rates are endogenous. There are many factors that should be vital for determining long run growth, although in all endogenous growth models, government can influence growth, both directly or indirectly (Brons, de Groot and Nijkamp, 1999). As a result, long-term growth rates can bde different across nations, and there is no necessity that convergence in income per capita should occur. More significantly, as Abu and Abdullahi, (2013) report, a major implication of endogenous growth models is that government policy can have wide-ranging implications for a country's long-run growth performance. Namely, the three main fiscal instruments, being expenditure, taxation, and the aggregate budgetary balance, affect long-term growth through their effects on the efficiency of resource utilise, the rate of factor accumulation and the pace of technological progress.

In the macroeconomic literature, the relationship between government size and output variable has been resolved both theoretically and empirically. In the old Keynesian economics the attention was concentrated on automatic fiscal stabilizers joined with the income taxes, but these models are not based on optimizing behaviour. Aigheyisi (2014) has provided a survey and further research of automatic stabilizers in the partial equilibrium context an optimizing consumer choice model. He reveals amongst others that the more the economic shocks are perceived as eccentric, the more the income tax would serve as an automatic stabilizer for insurance reasons. There are

also some efforts to furnish a theoretical analysis of automatic stabilizers in stochastic dynamic general equilibrium models. Maku (2013), for instance, has studied the effects of government size on output variability (volatility) in the setting of a real business cycle in which government size is parameterized by the income tax rate and the share of government purchases in output. In his theoretical model, income taxes are destabilizing, whilst for much specifications of government procurements are stabilizing.

In Nurudeen and Usman (2013), public expenditures fluctuate when any intervention of the government is required to re-equilibrate the economic activity. The government utilizes fiscal policy to combat inflation, it would respond by decreasing public spending when inflation increases; also, when the share of unemployment rises, the government is inclined to raise public spending Dandan (2014) and Fluvian (2013) stipulate that unemployment influences public spending in short-run, but since unemployment does not increase trend wise, it is had then to see what it has to do in a long-run study.

Counter-cyclical policies would also make governments reduce public spending in periods where the budget deficit is significant. According to Bose et. al., (2012), the relationship between unemployment and public expenditure may follow some mechanical connection between social transfers and the number of unemployed or some Keynesian economic policy, which is designed to reestablish full employment. In any case, a rise in the rate of unemployment tends to a higher public spending.

Another determinant is the growth of population since it indicates much need of health care and education commodities, and leads then to an increase of public spending.

Understanding the reasons for government expenditure growth has been a central interest of public economists going back at least as far as Wagner, (1893) and beginning in more recent times with Baker, (2014). An large size of government is often prove to be the reason of many economic ills in both developed and developing countries, including retard economic growth, internal imbalances, large government

deficits (e.g., inflation, rising interest rates), and external imbalances (e.g., trade deficits, falling exchange rates). Theories of why government spending grows can be broadly classified into institutional and a-institutional approaches (Borcherding and Lee, 2014).

Institutional approaches concentrate on political/public choice considerations, such as the duties of government bureaucrats, voter-taxpayers, and special interests as they engross in rent-seeking; institutional approaches also depend upon structural changes (e.g., voter suffrage) and major shocks (e.g. economic crises, war) to the political system. An institutional theory laid emphasis on the impacts of changing market conditions (e.g. income and price effects) on the demands for government services. One of the earliest and perhaps most rottenly mentioned factors of public spending is the economic growth which is famously known as Wagner's law".

Wagner's law of expanding state activity" (Wagner 1883, pp.1-8) has been elaborated by many scholars of Public Economics (for example, Baro (1992), Musgrave (1989) and Gupta (2013). The law argues that peoples' demand for service and willingness to pay is income-elastic therefore; the expansion of public economy is controlled by the greater economic affluence of a nation (Aschauer, 2014). In other words, the domain of government likely to improve with the greater level of income and often said to imply that the income elasticity of demand for government is larger than unity (Onakoya and Somole, 2013).

2.3 Empirical Review

Much empirical researches have been research upon to examine the impact of government expenditure on economic growth in various countries. The results however have been varied. While some observe that public expenditure favours growth, others argued that excessive government expenditure could be detrimental to growth.

Many authors in Nigeria have tried to investigate government-economic growth relationship. Fajingbesin and Odusola (2012) empirically investigated the correlationamong government expenditure and economic growth in Nigeria. Their econometric results indicated that actual government capital expenditure has a significant positive influences on real output. However, the results revealed that actual government recurrent expenditure affects growth merely by little. Odedokun (2012) and Shioji (2012) take related result as they find that infrastructural public investment encourages economic growth. Odedokunfocused on a sample of 48 unindustrialized countries during period 1970-1990, while the latter study absorbed on 48 states in United States over the time frame from 1963-1967 and on 46 Japans regionsthroughouttheperiod of 1955-1999, some researcher nevertheless believe the government spending has negative effects on economic growth.

The study of Abu and Abdullahi (2013) in their short-run analysis of recurrent and capital expenditures, and government spending on agriculture, education, defence, health and transport communication sectors of the Nigerian economy gotten results that shown that government total capital expenditure, total recurrent expenditure, and government expenditure have negative effects on economic growth.

On the contrary, the growing government expenditure on health, transport, communication, results to arise in economic growth. Also Maku (2012) observed the connectionamong government spending and economic growth in Nigeria over the last three decades using time series data to investigate the Ram (2012) model and regression real GDP on private investment, human capital investment. He established for the existence of stationary in the variables using the Augmented Dicker Fuller (ADF) unit root test, and used the co-integration test to create the long-run relationship between variable, the Error Correction Model (ECM) was used. Empirical results revealed that public and private had inconsequential effects economic growth throughout the evaluation time frame.

Oyinlola (1993) used defence expenditure and economic growth in Nigeria, and found a positive connectionamongdefence expenditure and economic growth. Abu and Abdullahi (2014) in their paper notices that rising government expenditure has not translated to meaningful development as Nigeria still ranks amid world poorest countries. In an effort to examine the effect of government expenditure on economic growth, we engaged a disaggregated analysis. The results show that government total capital expenditure (TCAP), total recurrent expenditures (TREC), and government expenditure on education (EDU) have negative effect on economic growth. On the differing, intensifying government expenditure on transport and communication (TRACO), and health (HEA) results to arise in economic growth.

Mitchell (2015) gauged the impact of government spending on economic performance in developed countries. He evaluated the international evidence, revised the modern academic research, quoted examples of countries that have significantly reduced government spending as a segment of national output and analyzed the economic magnitudes of these reforms. Regardless of the model used, he decided that anenormous and rising government is not advantageous to enhanced economic performance. Additionally, he debated that decreasing the size of government would tend to greater incomes and increase American`s competitiveness.

Sinha (1998) studies the correlationamong government expenditure and GDP in China, and reveals that a robust positive relationship exists among both variables. The Granger causality test shows there is indication of unidirectional causality, with causativeness running from government expenditure to GDP.

Ogbulu and Torbira (2012) carried out empirical work on Budgetary Operations and Economic Growth: The Nigerian Perspective. The workimplemented the linear OLS mechanism in the analysis of budgetary economic growth model processed after

multivariate regression model of linear formation. The ECM was used to specify how the parting from the long-run equilibrium is rectified. The work shows that five budgetary items: nonoil revenue, economic, administrative, social and transfer expenditures exerted a significant effects on the GDP.

Loizides and Vamvoukas (2012) investigate the causativecorrelationamong the comparative size of government and economic growth rate using data on Greece, UK and Ireland, and discover that government size Granger causes economic growth rate in all three countries in the short run, and in the long run for Ireland and UK, and that economic growth Granger causes rise of the comparative size of government in Greece, and Ireland when inflation is included.

Dean Baker (2014) examines a study on the economic effect of Iraq war and higher military spending. The study showed that military spending drains resources from theproductive economy. For this reason, it typically leads to retard economic growth, fewer investment, advanced trade deficits and less jobs.

In a work to observe the growth impact of public expenditure for a panel of 30 developing countries over the 1970s and 1980s Bose et al (2012) shows that the share of government capital expenditure in GDP is positively and significantly interrelated with economic growth, while current expenditure is witnessed to be irrelevant. At the dis-aggregated level, government investment in education and total expenditures in education are the only expenses that were detected to be significantly related with growth if the budget restriction and misplaced variables are taken into concern.

Applying two different panel data methodologies to seven transition economies in South Eastern Europe, Alexiou (2013) shows proof for the backing of significant positive impact of government spending on capital formation on economic growth. Cooray (2013) investigated the part of the government in economic growth by

spreading the neo-classical production function to integrate the two dimensions of government - the size dimension (measured by government expenditure) and quality dimension (measured by governance) for a cross-section of 71 economies. The empirical evidence indicated that the two dimensions of government are imperative for economic growth. Similarly, Wu et al (2012) observed the causal correlationamong government expenditure and economic growth by utilizing a panel data set which include 182 countries covering the time frame from 1950 to 2004, and in 2014 Oziengbe Scott Aigheyisi: The Relative Impacts of Federal Capital and Recurrent Expenditures on Nigerian Economy (1980-2011) results provided evidence that strongly supports both Wagners law and the hypothesis that government spending favors economic growth regardless of how government dimension and economic growth are measured. By disaggregating the countries by income levels and the extent of corruption, their result also established existence of bi-directional causality between government activities and economic growth for the diverse sub-samples of countries, with the omission of low income countries.

In a study to examine the effects of government expenditure on economic growth in Nigeria in the 1970-2008 period, Nurudeen and Usman (2013) find that government total capital expenditure, total recurrent expenditure and expenditure on education have negative impact on economic growth. Expenditure on transport,health and communication are neverthelessperceived to have positive impact on growth. Related study by Loto(2014), employs the method of co-integration and error correction device to examine the effect of government expenditures in several sector of the economy such as education,national security, health, transportation and communication, and agriculture, on economic growth in Nigeria in the 1980-2000 period, and shows that government expenditure on agriculture and education effects negatively on economic growth, nevertheless the effect of expenditure on education is detected to be irrelevant. The effect of expenditure in the health sector on economic growth is detected to be positive and important, whereas the effect of expenditure on

national security, transportation and communication are witnessed to be positive and statistically insignificant.. Employing the ordinary least squares estimation technique, Muritala and Taiwo (2012), examine the effect of recurrent and capital expenditure on GDP and discover that both components of government expenditure have significant positive impacts on the GDP.

Chude and Chude (2013) observe the effect of Government Expenditure on Economic Growth in Nigeria between the time frame of 1977 to 2012. The workemphases on the sectorial expenditures analysis. The study used Ex post facto design and Error Correction Model in its analysis. The work shows that total expenditure education is extremely and statistically significant and has positive relationship on economic growth in Nigeria in the long run.

Using diverse regression models for time series data covering the period 1990-2006 on Jordan, Dandan (2014) finds that government expenditure at the aggregate level has positive impact on the growth of GDP. He also finds that interest payment (a control variable in the model) has no influence on GDP growth. In a study to examine the relative effectiveness of monetary and fiscal policies in Nigeria, Aigheyisi (2014), employs the method of co-integration and error correction using quarterly data spanning the period 1981 (Q3) to 2009 (Q4) and shows that total government expenditure positively affected real gross domestic product (RGDP) in the short run. By revertingGDP on capital and recurrent expenditure, Sharma (2012) shows an irrelevant negative correlationamong the capital expenditure and recurrent expenditure, and the real GDP for the Nepalese economy, accredited to mismanagement and embezzlement of public funds by government officials and political appointees.

Modebeet al (2012), examine the impact of recurrent and capital expenditure on Nigerias economic growth using multiple regression analysis for data covering the time frame between 1987 to 2010 and show that the effect of both components of

expenditure was statistically insignificant, though the impact of recurrent expenditure was positive and that of capital expenditure, negative. However, the findings cannot be trusted upon as the diagnostic statistics demonstrate the estimated model to be invalid. For example, the DW-statistic of 1.413043 points to the problem of positive autocorrelation, which could render policies formulated on the basis of such models impotent.

Devarajan and Vinay (2012) used panel data for 14 developed countries for a period ranging from 1970 to 1990 and applied the Ordinary least square method on 5-year moving average. They took various functional types of expenditure (health, education, transport, etc) as explanatory variables and found that health,communication and transporthave significant positive impact while education and defencehave a negative effect on economic growth.

Using panels of annual and period-averaged data for 22 Organizations for OECD countries throughout 1970 to 1995, Bleaney et al (2013) studied the effect of government spending on economic growth. Applying OLS and GLS methods, they establish that industrious public expenditures enhance economic growth, but non-productive public spending does not, in harmony with the forecasts of Barro (1990) model.

Aregbeyen (2012) whereas carrying out his study established that a positive and significant correlation exists among capital expenditure and economic growth but a negative correlationamong recurrent expenditure and economic growth.

Modebe et al (2012) observed the effect of government capital and recurrent expenditure on the Nigerian economy from 1987 to 2010 using three variables multiple regression model. While capital expenditure had a negative and non-

significant effect on the economy, recurrent expenditure had a positive and non-significant effect on the same economy.

Ogujiuba and Adeniyi (2012) observed the effect of government education expenditure on economic growth. Their result revealed a statistically significant positive correlationamong economic growth and recurrent expenditure on education, whereas capital expenditure was wrongly signed and not significant in its contributions.

Bose, Haque and Osborn (2014) used panel data for thirty developing countries in their analysis of disaggregated government expenditure. Their study shown that theshare of government capital expenditure in GDP is positively and significantly linked with economic growth, while the growth effect of current expenditure is insignificant for our group of countries.They also found that at the sectorial level, government investment and total expenditures in education are the only expenses that remain significantly related with growth during the analysis.

Amassoma, Nwosa, and Ajisafe (2011) used the error correction model to study the effect of government expenditure disaggregated into agriculture, education, health, transport, and communication on the Nigerian economy with data from 1970 to 2010. They concluded that only agriculture expenditure had a significant impact on the economy. Others had insignificant influence on economic growth.

Saad and Kalakech (2012) disentangled governmental expenditures and used a multivariateco-integration analysis to observe the effect of each sector on economic growth. Four sectors were taken into account: defense, education, health, and agriculture. Their findings disclose that government expenditure on education has a positive effect on growth in the long-run and negative effect in the short-run. Whereas spending on defense has a negative impact on economic growth in the long run and

insignificant effect in the short-run. As to health spending, it is positively related to growth in the long-run and there is insignificant association in the short-run. Onakoya and Somole (2013) adopt the three-stage least square simultaneous equations estimation technique to test the effect of public capital expenditure on economic growth in Nigeria in the perspective of macroeconomic context at sectorial level. The empirical results show that public capital expenditure contributes meaningfully to economic growth in Nigeria. The results also reveals that public capital expenditure, positively impacts on the output of oil and manufacturing, but adversely affected the output of manufacturing and agriculture. The effect on the services sector is neverthelessperceived to be insignificant. Additional evidence from the empirical results is that public capital expenditure indirectly boosts economic growth by boostingprivate sector investment attributable to the enabling role of government in the delivery of public goods/infrastructure.

Gemmell and Kneller (2012) provide empirical evidence on the impact of fiscal policy on long-run growth for European economy. Their work required that at least two of the taxation/expenditure/deficit effects must be revealed concurrently and they used panel and time series econometric techniques, with dealing with the endogeneity of fiscal policy. Their results indicate that whereas some public investment spending impacts positively on economic growth, consumption and social security spending have zero or negative growth effects.

2.4 Literature Gap

The focus of this research is different from other researchers work and hasformed the gap that this study has filled. The gap which this research has filled isthe number of years covered in this work, it covers 36 years(1981-2016) as the span of study and most recent, as against other work that end their research in 2015 and for some few

years. Again the gap has looked at before and after this present democratic dispensation.

2.5 Summary

From the above review of various form of related literature, different school of thought have deem it fit to make their contributions whether positive or not, as to the impact of government expenditure on economic growth via aggregated and disaggregated approach. Different aspect of the conceptual framework was analyzed vis-à-vis government expenditure and economic growth. Also various school of thought views was also consider theoretically, to make the work near error free e.g the Musgrave Theory of Public Expenditure Growth, The Wagners Law/ Theory of Increasing State Activities, The Keynesian Theory, The Solows Theory, The Endogenous Growth Theory and Economic Theory of the State and the Cost of Governancee.t.c.

It was also important that the researcher took it to heart to look into the outcome of various related literature from experts and authors empirically, in form of aggregated and disaggregated approach, from underdeveloped to developing as well as developed countries. Various researchers arrived at their findings through different methods of data analysis that ranged from Ordinary Least Squares(OLS), Augmented Dickey Fuller(ADF) Unit Root Test, Cointegration, Error Correction Model(ECM), to Granger Causality, etc. All these instruments of data analysis was use to arrive at the result of the different research, which is, the impact of government expenditure on economic growth.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Undertaking any research study entails a time span coverage, in this regard, the time period that will be chosen for this study is 36years from 1981 to 2016. In the previous chapter, relevant literature on the subject of government expenditure and economic growth were revealed. Though various authors have their different views as to the impact of government expenditure on economic growth whether positively or negatively screwed.

This chapter on the other hand, will discusses extensively the various methods, procedures and processes that would be used in obtaining and analyzing the various and necessary information that are needed to test the hypothesis already formulated in chapter one. Thus, the research design, population and sample size, sampling technique, methods of data collection, and techniques of data analysis would be dealt with in this chapter

3.2 Research Design

According to Nzelibe and Illogu (1996) "research design is a comprehensive overall plan or blue print showing that the research intends to solve the identified research problem". A research design, has also been defined by Olannye, (2006) as the approaches, framework or plans of carrying out research studies. It is used as a guide in collecting and analyzing data. Asike (1991), views research design as the structuring of investigation aimed at identifying variables and their relationship to one another.

It is of great importance for the researcher to specify the type of design or method suitable for the problem to be investigated. The nature of the problems under investigation will influence and determine the choice of the research design to be used. The purpose of the study also plays a dominant role in determining the choice of

research. Baridan, (2001) asserts that research design does not mean the specific method of collecting data e.g questionnaire, interviews or direct observation, but the more fundamental question of how the study subjects will be brought into the scope of the research and how they will be adopted within the research setting to obtain the required data.

In this study, the ex-post facto research design was used. This is geared for the purpose of obtaining data to enable the researcher test hypothesis or answer research question. Based on the above statement, the study presents conceptual, theoretical and empirical analysis of the effect of government expenditure components on Nigeria economy.

3.3 Population and Sample Size

Population is an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study the population will be all the ministries in Nigerian , while the sample size will be some selected indices of capital and recurrent expenditure which are; General Administration, Defence, Education and Health.

3.4 Sampling Techniques

This refers to the procedure to be adopted in selecting items for the population.
For the purpose of this research work non probability sampling technique is used because not all the indices in the capital and recurrent expenditure was given the opportunity to be included in this work.

3.5 Method of Data Collection

The sources that was used in collecting data in this study or investigation, depends on the type of data needed and the purpose of the investigation. The researcher used only secondary method of data collection in obtaining data for this research work. It relied

heavily on time series data from the Central Bank of Nigeria Statistical Bulletin. The data collected are annually basis from 1981-2016.

3.6 Techniques of Data Analysis

The Ordinary Lease Square (OLS) technique was used under the software package E-view 7.0. The following statistics was used to test for the global statistical validation of the relationship between the variables of the study.

(i) R – Squared (R^2)

The co-efficient of determination. It determines the proportion of variation of the ex-post facto variables. It provides an indication of how well the model fits the line of data. The value of R^2 lies between 0 and 1.

(ii) F – Statistics

It is a test for the overall significance of the models, it implies that at zero level of significance, the models are rightly specified. It implied the null hypothesis against the alternative hypothesis.

This magnitude or type of outcome, help to test the stationarity of the independent variables as against the dependent variables, to know if there is a positive or negative serial correlation and/or if there is an absence of autocorrelation or presence of serial correlation.

3.7 Model Specification

The model that was estimated in the course of this study is stated below:

GDP = F(GADM, DFC, EDUT, HTH,).....(1)

Where:

GDP = Gross Domestic Product.

GADM = General Administration Expenditure

DFC = Defence Expenditure

EDUT = Education expenditures.

HTH = Health expenditures

The above equation are expressed econometrically as

$GDP = C_0 + C_1 GADM + C_2 DFC + C_3 EDUT + C_4 HTH + U_t$……(2)

Where:

GDP = Dependent variable

GADM, DFC, EDUT, HTH = Independent variables.

Taking the natural logarithm form of the model, which allows for easy interpretation of their coefficient as elasticity's, we have:

$GDP = C_0 + C_1 LGADM + C_2 LDFC + C_3 LEDUT + C_4 LHTH + U_t$……(3)

Where:

LGADM = Log of General Administration expenditure

LDFC = Log of Defence Expenditure

LEDUT = Log of Education expenditures.

LHTH = Log of Health expenditures

C_0 = Regression constant or the intercept

C_1-C_4 = Regression parameters or slope coefficient

U = Stochastic or error term.

3.7.1 Apriori Expectation

It is the initial presumption and deduction of the researcher that increase in expenditure on General Administration would have a negative and insignificant impact on GDP while Defene, Education and Health would have positive and significant impact to GDP which goes in addendum with the alternative hypothesis that was proposed in Chapter one of this study. This can be represented mathematically as:

$GADN < 0$

While DFC, EDUT, HTH > 0.

3.8 Summary

This chapter gave insight into the research methodology used to carry out the research work. The variables for this study and as well as the analytical tools have been expressly stated.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter considered the presentation and analysis of data from government expenditure on General Administration, Defence, Education and Health in Nigeria for the period of 1981-2016, collected from the Central Bank of Nigeria (CBN) Statistical Bulletin and online publication. This part of the research work is critical and vital in order to test the validity of the hypothesis stated in chapter one (1) earlier on the effect of Government expenditure components on Nigeria economy, viz-a-viz disaggregated approach, which will form the basis of the recommendations that will be made to stakeholders in the Nigeria Government.

4.2 Presentation and Analysis of Data

The following below are the relevant data collected from the Central Bank of Nigeria Statistical Bulletin (2016) from four(4) relevant government expenditures and GDP, for the relevant years of assessment (1981 – 2016).

The analysis was done in the disaggregated approach in order to arrive at the objective of the study.

TABLE 4.1: Government Expenditure Components Data (₦'Billions)

YEAR	GDP	GADM	DFC	EDUT	HTH
1981	12751.21	0.91	0.10	0.17	0.08
1982	13953.06	1.04	0.19	0.19	0.10
1983	13849.73	0.90	0.23	0.16	0.08
1984	13779.26	1.10	0.45	0.20	0.10
1985	14953.91	1.43	0.89	0.26	0.13
1986	15237.99	1.45	1.05	0.26	0.13
1987	15263.93	3.84	1.09	0.23	0.04
1988	16215.37	5.78	1.12	1.46	0.42
1989	17.294.68	6.27	1.22	3.01	0.58
1990	19305.63	6.54	1.34	2.40	0.50
1991	19199.06	6.95	1.75	1.26	0.62
1992	19620.19	8.68	2.00	0.29	0.15
1993	19927.99	30.57	3.99	8.88	3.87
1994	19979.12	11.93	4.21	7.38	2.09
1995	20353.20	16.90	6.60	9.75	3.32
1996	21177.92	24.56	10.82	11.50	3.02
1997	21789.10	30.92	14.21	14.85	3.89
1998	22332.87	23.93	14.76	13.59	4.74
1999	22449.41	85.79	53.16	43.61	16.64
2000	23688.28	67.46	43.40	57.96	15.22
2001	25267.54	75.08	47.07	39.88	24.52
2002	28957.71	117.94	69.13	80.53	40.62
2003	31709.45	166.12	51.06	64.78	33.27
2004	35020.55	101.26	76.32	76.53	34.20
2005	37474.95	248.73	71.67	82.80	55.66
2006	39995.50	284.62	84.15	119.02	62.25
2007	42922.41	310.11	72.10	150.78	81.91
2008	46012.52	369.53	95.85	163.98	98.22
2009	49856.10	437.93	54.84	137.12	90.20
2010	54612.26	694.54	196.71	170.80	99.10
2011	57511.04	699.20	283.20	335.80	231.80
2012	59929.89	500.10	296.80	348.40	197.90
2013	63218.72	546.76	272.33	390.42	179.99
2014	67152.79	445.17	274.53	343.75	195.98
2015	69023.93	488.20	330.59	325.19	257.72
2016	66465.14	493.37	292.48	353.12	211.23

(Source: CBN Statistical Bulletin 2016)

4.3 Analysis of Data

The data used in this research work was collected from CBN statistical bulletin from the period of 1981 to 2016. It is observed that, GDP has steadily increased since 1981 till 2016 from #12751.21 billion to #66465.14 billion but witnessed some decreased in the periods. Taking the analysis in interval of four years, in the year 1981 to 1984 GADM increased from 0.91 to 1.1, DFC increased from 0.10 to 0.45, EDUT increased from 0.17 to 0.2 and HTH increased from 0.08 to 0.1.

In the year 1985 to 1988 GADM increased from 1.43 to 5.78, DFC increased from 0.89 to 1.12, EDUT increased from 0.26 to 1.46 and HTH increased from 0.13 to 0.42.

In the year 1989 to 1992 GADM increased from 6.27 to 8.68, DFC increased from 1.22 to 2 while EDUT decreased from 3.01 to 0.29 and HTH decreased from 0.58 to 0.15.

In the year 1993 to 1996 GADM decreased from 30.57 to 24.56, DFC increased from 3.99 to 10.82, EDUT increased from 8.88 to 11.5 and HTH decreased from 3.87 to 3.02.

In the year 1997 to 2000 GADM increased from 30.92 to 67.46, DFC increased from 14.21 to 43.4, EDUT increased from 14.85 to 57.96 and HTH increased from 3.89 to 15.22.

In the year 2001 to 2004 GADM increased from 75.08 to 101.26, DFC increased from 47.07 to 76.32, EDUT increased from 39.88 to 76.53 and HTH imcreased from 24.52 to 34.2.

In the year 2005 to 2008 GADM increased from 248.73 to 369.53, DFC increased from 71.67 to 95.85, EDUT increased from 82.8 to 163.98 and HTH increased from 55.66 to 98.22.

In the year 2009 to 2012 GADM increased from 437.93 to 500.1, DFC increased from 54.84 to 296.8, EDUT increased from 137.12 to 348.4 and HTH increased from 90.2 to 197.9.

In the year 2013 to 2016 GADM decreased from 546.76 to 493.37, DFC increased from 272.33 to 292.48, EDUT decreased from 390.42 to 353.12 and HTH increased from 179.99 to 211.23.

4.4 Test of Hypothesis

Hypothesis One:

H_0: There is no significant impact between General Administrative Expenditure and Gross Domestic Product.

H_1: There is significant impact between government general administrative expenditure and Gross Domestic Product.

Decision: We reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1) and conclude that General Administrative Expenditure has a positive and significant impact on Gross domestic Product.

Hypothesis Two:

H_0: There is no significant impact between Defence expenditure and Gross Domestic Product.

H_1: There is significant impact between Defence expenditure and Gross Domestic Product.

Decision: We accept the null hypothesis and reject the alternative hypothesis and conclude that expenditure on defence has a negative and insignificant impact on Gross Domestic Product.

Hypothesis Three:

H_0: There is no significant impact between Education Expenditure and Gross Domestic Product.

H_1: There is significant impact between Education expenditure and Gross Domestic Product.

Decision: We reject the null hypothesis (H0) and accept the alternative hypothesis (H1) and conclude that Education Expenditure has a positive and significant impact on Gross domestic Product.

Hypothesis Four:

H_0: There is no significant impact between Health Expenditure and Gross Domestic Product.

H_1: There is significant impact between Health expenditure and Gross Domestic Product.

Decision: We accept the null hypothesis (H_0) and reject the alternative hypothesis (H_1) and conclude that Health Expenditure has a positive but insignificant impact on Gross domestic Product.

Analysis of Data Techniques

TABLE 4.2: Ordinary Least Square (OLS)

Dependent Variable: GDP
Method: Least Squares
Date: 11/15/17 Time: 11:38
Sample: 1981 2016
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18110.89	928.4533	19.50652	0.0000
GADM	31.08980	7.842302	3.964371	0.0004
DFC	-12.01745	35.92824	-0.334485	0.7403
EDUT	66.70231	31.45608	2.120490	0.0423
HTH	51.18234	52.27616	0.979076	0.3354

R-squared	0.953618	Mean dependent var	32027.36
Adjusted R-squared	0.947434	S.D. dependent var	18263.60
S.E. of regression	4187.341	Akaike info criterion	19.64908
Sum squared resid	5.26E+08	Schwarz criterion	19.87128
Log likelihood	-338.8590	Hannan-Quinn criter.	19.72578
F-statistic	154.2019	Durbin-Watson stat	2.046493
Prob(F-statistic)	0.000000		

Estimation Command:
==========
LS GDP C GADM DFC EDUT HTH

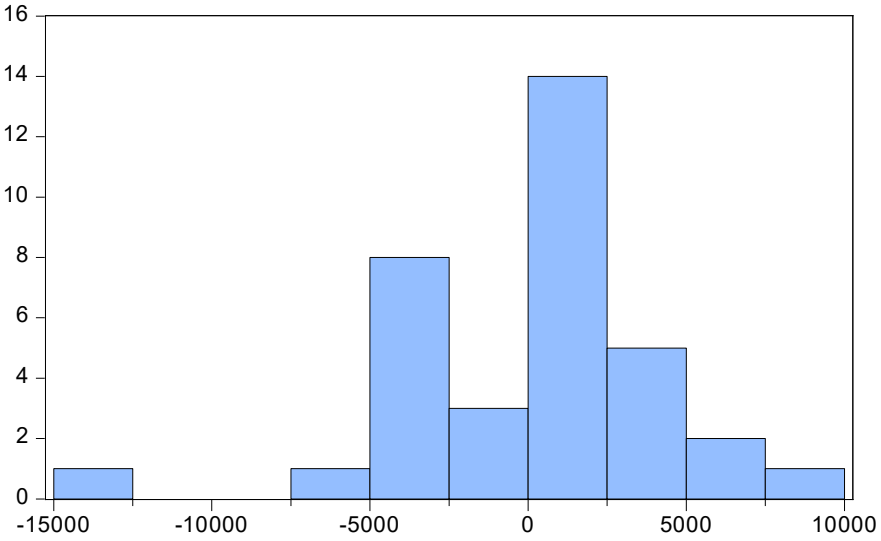
Estimation Equation:
==========
GDP = C(1) + C(2)*GADM + C(3)*DFC + C(4)*EDUT + C(5)*HTH

Substituted Coefficients:
==========
GDP = 18110.8910052 + 31.0897979838*GADM - 12.0174508938*DFC + 66.7023051584*EDUT + 51.182336837*HTH

SOURCE: E-VIEW 7.0

Diagnostic Test:

Figure 4.1: Normality test



Series: Residuals	
Sample 1981 2016	
Observations 35	
Mean	9.04e-12
Median	821.8384
Maximum	7823.515
Minimum	-13197.20
Std. Dev.	3933.322
Skewness	-0.897802
Kurtosis	4.970029
Jarque-Bera	10.36177
Probability	0.005623

Table 4.3: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	6.638693	Prob. F(2,28)	0.0044
Obs*R-squared	11.25819	Prob. Chi-Square(2)	0.0036

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 11/15/17 Time: 11:39
Sample: 1981 2016
Included observations: 35
Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	194.7362	794.8318	0.245003	0.8082
GADM	-10.65113	7.457615	-1.428222	0.1643
DFC	1.018807	30.89734	0.032974	0.9739
EDUT	39.33502	28.98002	1.357315	0.1855
HTH	-38.11557	46.07204	-0.827304	0.4151
RESID(-1)	0.644866	0.192067	3.357513	0.0023
RESID(-2)	0.037514	0.192704	0.194671	0.8471

R-squared	0.321662	Mean dependent var	9.04E-12
Adjusted R-squared	0.176304	S.D. dependent var	3933.322
S.E. of regression	3569.792	Akaike info criterion	19.37526
Sum squared resid	3.57E+08	Schwarz criterion	19.68633
Log likelihood	-332.0670	Hannan-Quinn criter.	19.48264
F-statistic	2.212898	Durbin-Watson stat	2.230998
Prob(F-statistic)	0.071486		

Table 4.4: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.900080	Prob. F(4,30)	0.0385
Obs*R-squared	9.759810	Prob. Chi-Square(4)	0.0447
Scaled explained SS	14.23349	Prob. Chi-Square(4)	0.0066

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 11/15/17 Time: 11:39
Sample: 1981 2016
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6860399.	6090237.	1.126459	0.2689
GADM	36320.42	51441.98	0.706046	0.4856
DFC	-157740.9	235673.1	-0.669321	0.5084
EDUT	-255778.7	206337.7	-1.239612	0.2247
HTH	690426.5	342908.2	2.013444	0.0531

R-squared	0.278852	Mean dependent var	15028996
Adjusted R-squared	0.182699	S.D. dependent var	30382351
S.E. of regression	27467080	Akaike info criterion	37.22644
Sum squared resid	2.26E+16	Schwarz criterion	37.44863
Log likelihood	-646.4627	Hannan-Quinn criter.	37.30314
F-statistic	2.900080	Durbin-Watson stat	2.100649
Prob(F-statistic)	0.038453		

Table 4.5: Stability Test

Ramsey RESET Test
Equation: UNTITLED
Specification: GDP C GADM DFC EDUT HTH
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	6.282958	29	0.0000
F-statistic	39.47556	(1, 29)	0.0000
Likelihood ratio	30.07134	1	0.0000

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	3.03E+08	1	3.03E+08
Restricted SSR	5.26E+08	30	17533828
Unrestricted SSR	2.23E+08	29	7681790.
Unrestricted SSR	2.23E+08	29	7681790.

LR test summary:

	Value	df
Restricted LogL	-338.8590	30
Unrestricted LogL	-323.8233	29

Unrestricted Test Equation:
Dependent Variable: GDP
Method: Least Squares
Date: 11/15/17 Time: 11:40
Sample: 1981 2016
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	21670.63	835.8626	25.92607	0.0000
GADM	56.07556	6.539054	8.575486	0.0000
DFC	9.481885	24.02585	0.394653	0.6960
EDUT	144.9099	24.25795	5.973710	0.0000
HTH	145.5950	37.72369	3.859510	0.0006
FITTED^2	-1.69E-05	2.68E-06	-6.282958	0.0000

R-squared	0.980357	Mean dependent var	32027.36
Adjusted R-squared	0.976970	S.D. dependent var	18263.60
S.E. of regression	2771.604	Akaike info criterion	18.84705
Sum squared resid	2.23E+08	Schwarz criterion	19.11368
Log likelihood	-323.8233	Hannan-Quinn criter.	18.93909
F-statistic	289.4701	Durbin-Watson stat	1.042317
Prob(F-statistic)	0.000000		

4.5 Discussion of Findings

The least square method tested the results into two folds:

(1) The relative statistics and

(2) The Global statistics.

The Ordinary Least Square test was adopted because the diagnostic test revealed that the assumptions of OLS were not violated by any of the variables.

The Relative Statistics

The relative statistics tested each variable separately from each other to ascertain the effect and significance level of each variable to the dependent variable. Below is the discussion of results of each independent variable using the Coefficients and P-Value of the t-statistics.

General Administration: The result of a simple regression analysis involving GDP and General Administration in Nigeria under the period of study revealed that there is a positive and significant effect between economic growth and General Administration Expenditure. The result shows that a 1% increase in General Administration Expenditure, will result to 31.0898 increase in GDP. It has a significant effect because the P-value of the statistics (0.0004) is less than 0.05 critical level. This goes in addendum with the work of Ogbulu and Torbira (2012) on Budgetary Operations and Economic Growth.

Defence: It can be seen from the regression result that Defence expenditure has a negative and insignificant effect on GDP. The coefficient of DFC has a value of -12.01745, which implies that a unit increase in Defence expenditure, will lead to about -12.017 reductions in GDP. The Probability value of 0.7114 which is more than 0.05 critical values indicates that there is no significant effect between the two variables. This goes in line with the work of Devarajan and Vinay (1993) on the effect of government expenditure on economic growth.

Education: The result of a simple regression analysis involving GDP and Education Expenditure in Nigeria revealed that there is a positive and highly significant effect on economic growth. The result shows that a unit increase in education expenditure will lead to about 66.70231 increase in GDP. The Probability value of 0.0423 which is less than

0.05 critical values indicates that there is a high significant effect between the two variables. This goes in addendum with the work of ofChude N.P. and Chude D.I. (2013) on Impact of government expenditure on economic growth in Nigeria and indicated that total expenditure on education is highly and statistically significant and have positive relationship on economic growth.

Health: It can be seen from the regression result that expenditure on Health has a positive but insignificant effect on GDP. The coefficient of HTH has a P- value of 51.1823, which implies that a unit increase in Health expenditure, will lead to about 51.1823 increase in GDP. The Probability value of 0.2847 which is more than 0.05 critical value indicates that there is no significant effect between the two variables. This goes in addendum with the work of Nurudeen and Usman (2010).

The impact of government expenditure on economic growth in Nigeria in the period of 1970-2008 (disaggregated into various components).

The Global Statistics

The effect of the global statistics was tested in all the variables using the R^2, Adjusted R^2, F-statistics and Durbin Watson (DW).

R-squared and Adjusted R-squared

The value of the R- squared (R^2) for the model is very high, pegged at 95.4%. It implies that expenditure on General Administration, Defence, Education, Health and Gross Domestic Product explained about 95.4% systematic variations in the level of Economic Growth in Nigeria over the period under study, while 4.6% left unexplained, is due to changes in other variables not captured in the models but represented by the disturbance term. This is explain by the value of the coefficient of determination (Adjusted R-squared). More so, the Adjusted R-squared confirms the R^2 at 94.7%, taking into consideration the degree of freedom and the inclusion or exclusion of a variable. The high value of the R-squared shows that the estimated regression models have a good fit on the data.

F-statistics

Adopting the probability of the F-statistics which is a test for the overall significance of the models, it implies that at zero level of significance, the model is rightly specified. The Prob(F-stat) of 0.000000, which is less than 0.05 critical level, indicates that the overall regression is statistically significant. We would therefore reject the null hypothesis and conclude that the overall variables have significant effect on economic growth in Nigeria.

Durbin Watson (DW)

The Durbin Watson Statistics in the model is 2.046493, which reveals to us that there is no serial correlation between expenditure on General Administration, Defense, Education, Health and the Gross Domestic Product viz-a-viz economic growth in Nigeria, and further shows that the model regression is not spurious and good/fit for regression. This work was pinned to the endogenous growth theory.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study portrays the effect of government expenditure components on Nigeria economy (1981-2016). The study among others revealed that:

General Administration Expenditure has a positive and significant effect on economic growth in Nigeria. This shows that an increase in General Administration Expenditure will likely result in increase in economic growth. This also will achieve its aim if every naira budgeted on this index is judiciously used without fraudulent activities by politicians.

Defence Expenditure has a negative and insignificant effect on Gross Domestic Product. It shows that both the coefficient result and P-Value has negative effect with the regression model. This shows that an increase in defence expenditure will only lead to a decrease in GDP.

Education Expenditure has a positive and significant effect on economic growth in Nigeria. This shows that an increase in Education Expenditure will likely result in increase in GDP. This also will achieve its aim if every naira budgeted on this index is judiciously used.

Health Expenditure has a positive but insignificant effect on Gross Domestic Product. It shows that the coefficient result was positive while the P-Value has negative effect because it is greater than the standard 0.05 critical value. This shows that an increase in health expenditure will have positive but insignificant effect on GDP.

5.2 Conclusion

This study has observed the effect of government expenditure components on Nigeria economy for the period 1981 - 2016. Existing literature reveals that researchers are yet to reach a consensus about the impact of government expenditure on economic growth in

Nigeria. Hence, the effect is yet to be well established. This study has added to the research effort at empirical measure of the effect of government expenditure on economic growth. Data analysis showed that correlation exists among government expenditure and economic growth, and that is however some components of government expenditure showed negative effect on growth, others exerted positive effect. As disaggregated components, capital and recurrent expenditures on economic services like general administration and education exerts positive and significant impact on economic growth, which tally with the findings of Chude N.P. and Chude D.I. (2013) on Impact of government expenditure on economic growth in Nigeria and indicated that total expenditure on education is extremely and statistically significant and have positive relationship on economic growth.

Capital expenditure on health exerts positive impact on Gross Domestic Product but has irrelevant effect on economic growth, and recurrent expenditures on safety of the lives of citizen social amenities (Defense) had insignificant and negative effect on GDP, which goes in line with J. Paul Dunne & Nan Tian (2013) on Military Expenditure, economic growth and Heterogeneity, revealed that, Military expenditure has a negative effect on economic growth. However, the aggregated or overall effect of government expenditure on economic growth is statistically significant, which also goes in addendum with the findings of UkpabiNnamdi (2013) on the empirical analysis of the impact of government expenditure on economic growth, that reveals that Government expenditure has a positive relationship on economic growth.

This also in agreement with the Keynesian (1936) view of government active intervention in the economy using various policy instruments. Also, as available CBN data on government expenditure and economic GDP exhibit increasing trend, the analysis correspondingly supports the Wagners (1813) postulate of Ever Increasing State Activity. Consequently, this analysis supports growing evidence that government expenditure has a relationship with and shows significant effect on economic growth. The study further concludes that the components of government expenditure (General Administration, Defense, Education and Health) considered in this study are important variables in

explaining economic growth in Nigeria and the style of government in Nigeria do not have any significant effect on its economic growth.

5.3 Recommendation

In the light of the research findings, the following recommendations are presented;
General administrative expenditure should be managed and monitored at the implementation stage to enhance comparable achievement viz-a-viz on economic growth.

Since defence expenditure and economic growth are negatively related, this study recommends adequate funding of defence sector in Nigeria. This is to support Devaranja and Vinay's views that even apparently less productive expenditure like security may provide social and political stability that is necessary for growth. Increase in defence expenditure will help take care of the headsmen killings, bokoharam sect and kidnapping situations in Nigeria, and reducing such expenditure could be counter - productive.

Education should be adequately funded and the funds should be monitored and utilized efficiently. This is necessary, considering the fact that education create positive externalities. Some of the researchers finding that, Education Expenditure is negatively related to economic growth in Nigeria, does not follow economic postulations. This may be due to economic factors such as corruption. Moreover, government should also increase its investment in this sector since the proportion of federal government education budget to total budget is still very low as its falls below the UNESCO set bench mark of 26% for developing countries.

The government should also endeavor to increase her expenditure on Health, to be able to get to the citizen in the rural area. The aftermath effect in the increase of her health expenditure is that, the people living in the rural area will be in good health to meet up with their daily activity of fishing and farming. On the other hand, they should also assist in rendering free health service like, anti-natal care, maternal care, children between the

age of 0-5,etc. It will boost the state of health of the rural citizens as well as attaining the welfare objective of the government.

Finally, capital and recurrent expenditures on economic services should be directed mainly to productive economic activities. This will stimulate activities in the economic sectors and, perhaps, reverse the negative effect on economic growth.

5.4 Contribution to knowledge

(i.) This work has been able to develop a predictive model for government expenditure components and Nigeria economy as: GDP = 18110.89 + 31.08980GADM - 12.01745DFC + 66.70231EDUT + 51.18234HTH.

(ii.) This work has also contributed to knowledge by looking at before this dispensation and the present democratic dispensation.

(iii.) This work also contributed to knowledge by using 2:2 components of both capital and recurrent expenditure which no other researcher has used.

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APPENDIX

Unit Root Test

GDP (2^{ND} DIFFERENCE)

Null Hypothesis: D(GDP,2) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.170075	0.0323
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDP,3)
Method: Least Squares
Date: 11/15/17 Time: 11:42
Sample (adjusted): 1984 2016
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1),2)	-0.806299	0.254347	-3.170075	0.0038
C	-71.73999	228.8466	-0.313485	0.7563

R-squared	0.271243	Mean dependent var	-94.03276
Adjusted R-squared	0.244252	S.D. dependent var	1416.934
S.E. of regression	1231.794	Akaike info criterion	17.13680
Sum squared resid	40967571	Schwarz criterion	17.23110
Log likelihood	-246.4837	Hannan-Quinn criter.	17.16634
F-statistic	10.04937	Durbin-Watson stat	1.553806
Prob(F-statistic)	0.003772		

GADM (1ST DIFFERENCE)

Null Hypothesis: D(GADM) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.954201	0.0000
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GADM,2)
Method: Least Squares
Date: 11/15/17 Time: 11:42
Sample (adjusted): 1983 2016
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GADM(-1))	-1.050810	0.176482	-5.954201	0.0000
C	15.20851	12.30744	1.235717	0.2256

R-squared	0.525592	Mean dependent var	0.148235
Adjusted R-squared	0.510767	S.D. dependent var	100.4103
S.E. of regression	70.23222	Akaike info criterion	11.39851
Sum squared resid	157842.1	Schwarz criterion	11.48830
Log likelihood	-191.7747	Hannan-Quinn criter.	11.42913
F-statistic	35.45251	Durbin-Watson stat	2.007671
Prob(F-statistic)	0.000001		

DFC (1ST DIFFERENCE)

Null Hypothesis: D(DFC) has a unit root

Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.539933	0.0001
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DFC,2)
Method: Least Squares
Date: 11/15/17 Time: 11:43
Sample (adjusted): 1983 2016
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DFC(-1))	-1.009831	0.182282	-5.539933	0.0000
C	8.692324	6.027950	1.442003	0.1590

R-squared	0.489559	Mean dependent var	-1.123529
Adjusted R-squared	0.473607	S.D. dependent var	46.30550
S.E. of regression	33.59599	Akaike info criterion	9.923713
Sum squared resid	36118.09	Schwarz criterion	10.01350
Log likelihood	-166.7031	Hannan-Quinn criter.	9.954332
F-statistic	30.69086	Durbin-Watson stat	1.944088
Prob(F-statistic)	0.000004		

EDUT (1ST DIFFERENCE)

Null Hypothesis: D(EDUT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.288196	0.0001
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EDUT,2)
Method: Least Squares
Date: 11/15/17 Time: 11:45
Sample (adjusted): 1983 2016
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EDUT(-1))	-0.935761	0.176953	-5.288196	0.0000
C	9.766208	6.041947	1.616401	0.1158

R-squared	0.466356	Mean dependent var	0.820882
Adjusted R-squared	0.449679	S.D. dependent var	45.59147
S.E. of regression	33.82140	Akaike info criterion	9.937087
Sum squared resid	36604.38	Schwarz criterion	10.02687
Log likelihood	-166.9305	Hannan-Quinn criter.	9.967706
F-statistic	27.96502	Durbin-Watson stat	1.985313
Prob(F-statistic)	0.000009		

HTH (2ND DIFFERENCE)

Null Hypothesis: D(HTH,2) has a unit root
Exogenous: Constant
Lag Length: 8 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.716487	0.0853
Test critical values:	1% level	-3.724070	
	5% level	-2.986225	
	10% level	-2.632604	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(HTH,3)
Method: Least Squares
Date: 11/15/17 Time: 11:46
Sample (adjusted): 1992 2016
Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HTH(-1),2)	-10.17076	3.744085	-2.716487	0.0159
D(HTH(-1),3)	7.866011	3.669380	2.143689	0.0489
D(HTH(-2),3)	6.746687	3.617291	1.865121	0.0818
D(HTH(-3),3)	5.621574	3.597500	1.562633	0.1390
D(HTH(-4),3)	5.344449	3.564343	1.499421	0.1545
D(HTH(-5),3)	4.836468	3.527494	1.371078	0.1905

D(HTH(-6),3)	5.940634	3.062421	1.939849	0.0714
D(HTH(-7),3)	5.134725	2.218453	2.314552	0.0352
D(HTH(-8),3)	1.897008	1.177835	1.610588	0.1281
C	6.523412	4.424227	1.474475	0.1610

R-squared	0.977012	Mean dependent var	-4.337200
Adjusted R-squared	0.963219	S.D. dependent var	81.86403
S.E. of regression	15.70023	Akaike info criterion	8.634403
Sum squared resid	3697.460	Schwarz criterion	9.121953
Log likelihood	-97.93003	Hannan-Quinn criter.	8.769628
F-statistic	70.83412	Durbin-Watson stat	1.746221
Prob(F-statistic)	0.000000		

Granger Causality Test

Pairwise Granger Causality Tests
Date: 11/15/17 Time: 11:40
Sample: 1981 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GADM does not Granger Cause GDP	31	1.38661	0.2678
GDP does not Granger Cause GADM		5.70842	0.0088
DFC does not Granger Cause GDP	31	2.40040	0.1105
GDP does not Granger Cause DFC		6.55506	0.0050
EDUT does not Granger Cause GDP	31	0.46577	0.6328
GDP does not Granger Cause EDUT		7.86699	0.0021
HTH does not Granger Cause GDP	31	1.29534	0.2909
GDP does not Granger Cause HTH		10.0983	0.0006
DFC does not Granger Cause GADM	34	3.24168	0.0536
GADM does not Granger Cause DFC		10.4876	0.0004
EDUT does not Granger Cause GADM	34	13.6884	7.E-05
GADM does not Granger Cause EDUT		25.2333	4.E-07
HTH does not Granger Cause GADM	34	3.52778	0.0425
GADM does not Granger Cause HTH		13.6717	7.E-05
EDUT does not Granger Cause DFC	34	4.25933	0.0239
DFC does not Granger Cause EDUT		15.5870	3.E-05
HTH does not Granger Cause DFC	34	1.51122	0.2375
DFC does not Granger Cause HTH		8.01104	0.0017

HTH does not Granger Cause EDUT	34	3.14773	0.0579
EDUT does not Granger Cause HTH		2.28158	0.1202

Johansen Co integration

Date: 11/15/17 Time: 11:40
Sample (adjusted): 1982 2016
Included observations: 33 after adjustments
Trend assumption: Linear deterministic trend
Series: GDP GADM DFC EDUT HTH
Lags interval (in first differences):

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.890075	173.0878	69.81889	0.0000
At most 1 *	0.791742	100.2253	47.85613	0.0000
At most 2 *	0.560543	48.44896	29.79707	0.0001
At most 3 *	0.457627	21.31588	15.49471	0.0059
At most 4	0.033558	1.126417	3.841466	0.2885

Trace test indicates 4 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.890075	72.86252	33.87687	0.0000
At most 1 *	0.791742	51.77630	27.58434	0.0000
At most 2 *	0.560543	27.13309	21.13162	0.0063
At most 3 *	0.457627	20.18946	14.26460	0.0052
At most 4	0.033558	1.126417	3.841466	0.2885

Max-eigenvalue test indicates 4 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

GDP	GADM	DFC	EDUT	HTH
8.06E-06	0.008684	0.026175	-0.012474	-0.036738
-6.38E-05	0.000627	0.023388	-0.034744	0.035592

-0.000225	0.006615	-0.007125	0.024469	0.008231
1.28E-05	0.004575	-0.032634	-0.012178	0.051115
9.46E-05	-0.006684	0.009828	-0.006132	0.004837

Unrestricted Adjustment Coefficients (alpha):

D(GDP)	594.8211	-1085.870	208.4630	348.3292
D(GADM)	-5.063849	-20.49403	-44.24640	16.87218
D(DFC)	13.02887	-9.867010	-5.667982	12.92719
D(EDUT)	27.30576	9.461565	-6.567806	6.153112
D(HTH)	20.56819	-8.283659	-6.771983	-4.405963

1 Cointegrating Equation(s): Log likelihood -901.3734

Normalized cointegrating coefficients (standard error in parentheses)

GDP	GADM	DFC	EDUT	HTH
1.000000	1077.055	3246.322	-1547.050	-4556.360
	(85.9465)	(386.175)	(339.466)	(561.743)

Adjustment coefficients (standard error in parentheses)

D(GDP)	0.004796
	(0.00212)
D(GADM)	-4.08E-05
	(0.00010)
D(DFC)	0.000105
	(4.4E-05)
D(EDUT)	0.000220
	(2.8E-05)
D(HTH)	0.000166
	(2.7E-05)

2 Cointegrating Equation(s): Log likelihood -875.4853

Normalized cointegrating coefficients (standard error in parentheses)

GDP	GADM	DFC	EDUT	HTH
1.000000	0.000000	-333.8686	525.5710	-593.8869
		(70.6483)	(60.2910)	(100.997)
0.000000	1.000000	3.324056	-1.924341	-3.678989
		(0.36127)	(0.30831)	(0.51647)

Adjustment coefficients (standard error in parentheses)

D(GDP)	0.074088	4.485039
	(0.01138)	(1.54074)
D(GADM)	0.001267	-0.056820
	(0.00076)	(0.10307)
D(DFC)	0.000735	0.106962
	(0.00033)	(0.04492)
D(EDUT)	-0.000384	0.243060

	(0.00019)	(0.02597)
D(HTH)	0.000694	0.173428
	(0.00020)	(0.02667)

3 Cointegrating Equation(s): Log likelihood -861.9188

Normalized cointegrating coefficients (standard error in parentheses)

GDP	GADM	DFC	EDUT	HTH
1.000000	0.000000	0.000000	27.61005	-269.8603
			(24.6586)	(39.7235)
0.000000	1.000000	0.000000	3.033447	-6.905056
			(0.46117)	(0.74291)
0.000000	0.000000	1.000000	-1.491488	0.970521
			(0.13348)	(0.21503)

Adjustment coefficients (standard error in parentheses)

D(GDP)	0.027106	5.863934	-11.31262	
	(0.04054)	(1.89112)	(6.19471)	
D(GADM)	0.011239	-0.349491	-0.296602	
	(0.00206)	(0.09593)	(0.31424)	
D(DFC)	0.002012	0.069471	0.150643	
	(0.00119)	(0.05531)	(0.18117)	
D(EDUT)	0.001097	0.199617	0.982816	
	(0.00064)	(0.02996)	(0.09813)	
D(HTH)	0.002221	0.128634	0.392883	
	(0.00066)	(0.03074)	(0.10069)	

4 Cointegrating Equation(s): Log likelihood -851.8240

Normalized cointegrating coefficients (standard error in parentheses)

GDP	GADM	DFC	EDUT	HTH
1.000000	0.000000	0.000000	0.000000	-226.5283
				(8.61609)
0.000000	1.000000	0.000000	0.000000	-2.144282
				(0.13795)
0.000000	0.000000	1.000000	0.000000	-1.370260
				(0.05287)
0.000000	0.000000	0.000000	1.000000	-1.569427
				(0.04560)

Adjustment coefficients (standard error in parentheses)

D(GDP)	0.031574	7.457428	-22.68009	31.16686
	(0.03785)	(1.91114)	(7.81286)	(7.40615)
D(GADM)	0.011456	-0.272306	-0.847214	-0.512949
	(0.00193)	(0.09759)	(0.39895)	(0.37818)
D(DFC)	0.002178	0.128609	-0.271226	-0.115824
	(0.00105)	(0.05326)	(0.21774)	(0.20641)
D(EDUT)	0.001176	0.227765	0.782013	-0.904988
	(0.00059)	(0.02971)	(0.12147)	(0.11515)

D(HTH)	0.002164	0.108478	0.536668	-0.080804
	(0.00063)	(0.03197)	(0.13071)	(0.12390)