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EFFECT OF GOVERNMENT EXPENDITURE ON ECONOMIC GROWTH

IN NIGERIA (1981-2013)

BY

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DECLARATION

I hereby declare that this thesis is my own original work towards the award of master of science in Economics and that, to the best of my knowledge, it contains no material published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been in my work.

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ABSTRACT

In this study, attempt was made to investigate the effect of government expenditure on economic growth in Nigeria. The study covers a period between 1980 and 2014 and uses aggregate time series data from secondary source. Relevant time series data used in the model includes those on gross domestic Product (GDP} and different structures of government. Results of the study show government expenditure has a significant effect on economic growth though the significance is form dependent. i.e. the form of government expenditure considered. Also, capital and recurrent expenditure have significant effect on economic growth but in varying degrees and extent. Finally, it was found out that capital expenditure would have exert positive impact on the level of economic growth but for the issue of corruption and institutional oddity in Nigeria though the intended capital expenditure is indirectly converted to recurrent expenditure somehow which has its own effect on the Economic growth.

DEDICATION

This project is dedicated to Almighty God my two daughters Abimbola Miracle and Oluwabusolami Devinefavour Oladitan. My wife Janet Olanike and, my brother- like friend Usman Baba Yakubu.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

Economic growth generally refers to a sustained increase in per capital national income or output over a long period of time. It is an economic situation whereby the quantum of increase in national output must exceed the rate of growth in population. As expressed in Nworji, I. D ,Okwu, A .T, Obiwuru T C and Nworji, L.O (2012) it means a growth in a nation's potential GDP, depending on the way and manner it is measured.

The attainment of Economic growth is a pertinent macroeconomic objective of nations, most importantly after the Second World War (Kumar, 2010). This is in view of the fact that almost all national economies and governments have lean towards to intervening and caring out the fundamental roles of allocation, stabilization, distribution and regulation of the economy especially in a situation where and when the market has proved to be inefficient and, or its activities has become socially unacceptable. In order to carry out these function governments pursues fiscal and monetary policy instruments such as taxation and spending (expenditure) to achieve accelerated economic growth and influence the working of the economy. The essence is to maximize economic welfare and ultimately ensure permanent aims of stimulating long-term growth of national economy.

Importantly, the parity between government expenditure and economic growth has continually triggered off series of debates among scholars. Overtime, government has been involved in fiscal policy measures such as provisions of public goods such as defense, road, education, health and power to mention but the few. Some scholar such as Abu and Abdullahi (2010) among others had argued that increase in government

1

expenditure on social-economic and physical infrastructures encourages economic growth. By implication then, it can be said that government expenditure on health and education raises productivity of labour and increase the growth of national output. Also, scholars such as Abu and Abdullahi (2000), Al-Yousif (2000), Ranjan and Sharma (2008) and Cooray(2009) were of the opinion that; government expenditure on infrastructural amenities such as road, communication, power and soon reduces production cost, increases private sector investment and profitability of firms and, hitherto fosters economic growth.

Other scholars on the hand totally objected the above claims and submitted that increasing government expenditure tend to slow down the overall performances of the economic. Laudau (1986), Baro (1991) were of the opinion that higher government expenditure leads to a disaggregated economy. They were of position that increase taxes and/or borrowing by governments may discourage individual from working as higher income taxes discourages individual from working for long hours or being motivated to work. This may consequently reduce aggregate national income and output vis-à-vis investment level. They also contended that increase government expenditure will lead to more borrowings by government and crowd out private sector leading to lesser investment and national output. The bottom-line of these studies as mentioned above is that higher government expenditure has a negative impact on economic growth.

A cursory look at the Nigeria economy since independence and more precisely since the end of civil war in 1970 and the oil boom that follows in the 1970s have shown that there has been continued increase in government expenditure as a result of huge receipts from production and sales of petroleum resources and an increase in the demand for

public goods such education, health, transport, communication, defence and security, agriculture, electricity and energy to mention but the few.

The paradox of the above is that the rising government expenditure, both recurrent and capital has not shown no any appreciable contribution to growth and development. To add to the above is the fact that over 50 percent of Nigerians are poverty ridden and lives under US $2 per day. To cap it, public infrastructures in Nigeria are in dilapidated state while industries are collapsing due to epileptic power supply and poor road network, all leading to higher rate of unemployment and insecurity. The macroeconomic indicators in the country are nothing to write home about as indicators like balance of payments, import obligations, inflation rate, exchange rate, GDP and national saving rate are all in dwindling state in the last couples of years (CBN 2008).

It is in lieu of the above tha this research thesis is designed to investigate the effect of government expenditure on economic growth in in nigeriaa between 1981 and 2013. This research will be country specific as it seeks to investigate the effect of government expenditure on economic growth in Nigeria.

1.2   Statement of the Problem

There has been no consensus among various theoretical literatures in relation to the effect of public expenditure on economic growth. Empirically, there are plethoras of works on the effect of public expenditure on economic growth in developing countries. Other studies like Easterly and Rebelo (1993) Singh and Weber (1997), Semmle, S.K (2007) , Motmmell (1990) and Delome (1999) established that there are significant positive growth effects of public expenditure, others, studies like AbuBadaer and Abu-Quarn (2003) and schaltegger and Torgler (2006) indicated that large government size is disadvantageous to economic growth. According to the CBN, a cursory look at the

total government (capital and recurrent) expenditures between 1980 and 2013 shown that government expenditure has been on the rising. For example, figures from CBN show that between 1970 and 2099, capital expenditure on economic services rose from N15.5milliom to809120.5, that on social and community services from 1.4million to120049.2million, and transfers from 100.7milliom to 211758.1 million. Likewise, on recurrent side during the same period, expenditures on services rose from 25.95million to 340193.77million, that on social and community services from 43,55million to 346071.95million and on transfer from 511.42milliom to 622171.10million (CBN, 2009). With these gorgeous increments in these sectoral allocations, the expectation is that there will be a correspondent growth trend in the economy. But what is the reality on ground? This is the crux of this study.   This study is a country specific analysis as it concentrates on Nigeria, its government spending and its effect on economic growth.

1.3   Objectives of the Study

Generally the objective of this research is to examine the effects of government expenditure on economic growth in Nigeria. Specifically, the study is set to;

i. To estimate the impact of government recurrent expenditure on economic growth. ii. To investigate the effect of government capital expenditure on economic growth.

iii.   To examine the effect of total government expenditure on economic growth

1.4   Research Hypotheses

Taking into consideration the above listed objective of the study, the following hypotheses are formulated;

4

i. **H0:** Government recurrent expenditure does not have any significant impact on economic growth in Nigeria.

H1: Government recurrent expenditure does have significant impact on economic growth in Nigeria. ii. **H0:** Government capital expenditure does not have any significant impact on economic growth in Nigeria.

H1: Government capital expenditure does have significant impact on economic growth in Nigeria. iii. **H0:** Government total expenditure does not have any significant impact on economic growth in Nigeria.

H1: Government total expenditure does have significant impact on economic growth in Nigeria.

1.5 Significance of the Study

The significance of the study is rooted in the belief that appropriate and prioritized government expenditure is imperative to economic growth in every economy. The states of affairs regarding public spending are topics that have attracted considerable debate in both developed and developing economies. Conversely, government expenditure has its peculiar problem in commanding increased economic growth as far as Nigeria is concern in spite of the assumed essential roles it plays in promoting economic growth. This research thesis therefore, this study seeks to be an addendum to existing studies by empirically analyzes the impact of government expenditure on economic growth with special attention to Nigeria.

Hence, it is believed that, the outcome of the empirical findings from this study will benefit among others the government, those in charge of managing government treasury

to have an insight into areas where public funds can be channeled so as to promote economic development and growth. Finally, it will stand as a better avenue to assist government and all stakeholders by aiding them to make rational choice in initiating and allocating public goods and on how public goods among competing ends to the benefit of the entire population.

1.6   Scope of the study

This thesis centers on issues in government expenditure and economic growth in Nigeria. It covers a period of 32 years (1981-2013). The reason for choosing this period is that the period is a period of military exigencies which eventually ushered the democratic government in 1999. The study uses aggregate time series data from secondary sources.

1.7   Organization of the Study

This project work is divided into five distinct but related chapters. Chapter one focuses on the introduction which includes background to the study, statement of problem, objectives of the study, study hypotheses, significance, scope of the study and, organization of the study.

Chapter two will focus on literature review and theoretical framework of the study while chapter three address research methodology

Chapter four will focus on data presentation, analysis and interpretation of results and; Chapter five is the last chapter and centers on summary, conclusion and recommendations for the study as well as the limitation of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

The chapter reviews related literatures on the problem under study. It dwells on theoretical reviews, the determinant of economic growth, and empirical literature review. It looks at the nexus public between expenditure management and economic growth, price stability, and Income redistribution among other macroeconomic objectives in Nigeria. The main objective is to explore the concepts and theories of public expenditure and theories of economy growth.

2.2   Theoretical Review

2.2.1 Theories of Economic Growth

There are many theories that have been propounded in order to explain the resolve by the government to use scarce resource to achieve its goals and objectives. These theories includes among others; Smith's Progressive state theory, theory of production by David Ricardo, stages of economic growth by W.W Rostow, the structuralist theory; the Solow model and the Endogenous growth theory. These theories are reviewed in this section.

2.2.1.1 Smith's Progressive State Theory

The David Ricardo's Theory of difference was propounded based on the argument that the progressive states are in tandem with reality; they are happy and healthy state with different orders or groups in the society. According to proponent, progressive state must prudently manage its resources in order to attain a high standard of living for its citizens as well as higher per capital income overtime. Accordingly, for a society to achieve growth in its economy, there is an astute need for religions and judiciously manage its

public finance in such a way, that higher living standard and per capital income is ensure.

2.2.1.2 The Structuralist

The structuralism argued that economic development and growth and is a trade-off between foreign and domestic power relations. They maintained that there are institutional and structural rigidities and, proliferation of dual economies within and among economies (Coats, 1996)

2.2.1.3 The Solow Model

The most popular theory of economic growth is the Solow model. This theory was put together by Solow and Swan. Solow and Swan postulated that Ceteris paribus [all things being equal], economic growth is determined by many factors which includes amongst others, among others scarcity assumptions, capital stock, labour and growth rate of population

Solow model further postulated that Capital accumulation per worker can only be achieved with increased saving/investment rates. Hitherto, the increased capital per worker will consequently leads to more output per worker. Romer (1990)

The expressed that increased population or high population growth will exert negative effect on economic growth. This submission is based on the fact that higher population growth will mean that saving in the economy will be shared by the higher population, thereby depleting the savings which is needed in order to keep the capitallabour ratio at a steady state. If there is no change in technology, Research, development and innovation, a rise in capital for each worker would not be facilitated by a comparing addition in yield per labourer as an after effect of unavoidable losses.

The deepen capital would cut down the rate of profit for capital.

2.2.1.4 The Endogenous Growth Model

This is an advancement of the Solow growth model. The endogenous growth hypothesis is more advanced than other growth models in the sense that it unequivocally tried to factor technology into the model [that is, as an endogenous factor, it examined technology as one of the determinants] rather than anticipating that it should be exogenous. According to the model, economic growth starts from technological development, which is fundamentally the initial capacity of an economic, that is, ability to utilize its profitable assets more effectively after some time. The highest portion of this category originates from the process of learning a new process/method of production (Barro, 2004).

2.3 Theories of Growth in Public Expenditure

The theories of growth in public expenditure clearly expressed that the management of economic activities is a product of managing the societal scarce resources. One important aspect of these theories is that they are main correspondents of public sector financial management. The theories includes; the Musgrave theories, theory of expanded state activities by Adolph Wagner (1961) (popularly known as the Wagner's law of expanding state activities), the displacement hypothesis by Wiseman and Peacock (1961), The critical-limit hypothesis, the Musgrave/Rostow theory and the Keynesian theory of public expenditure. The study shall in turn look at these theories one after the other.

Musgrave Theory of Public Expenditure Growth

The Musgrave's theory enunciates that changes income elasticity for public expenditure is in three district but related series of per-capita income. One in the lower level of per capita income, the demand for services has a tendency to be small. The reason for this

is that such income is channeled to satisfy the initial needs of the people and if these per capital income strive to surpass the level of income of the lower income earners, the demand for services supplied by the public sector will increase most importantly in the areas of health, education and transportation. The result is that government will be constrained to gear up expenditures on those services. At the higher level of per-capita income, most importantly in developed economies, once the basic needs are provided and satisfied, the rate of public expenditure do have the habit of decreasing more and more. Musgrave and Musgrave (1969)

Wagner's Law of Expending Public Activity

This law is postulated by a German economist in the 19th century. He expressed that as per capita income grows, growth is witnessed in the society through rapid urbanization and increase enlightenments from the people. This will automatically causes an increase in relative share of public sector in national output. To Wagner, the public's resultant increased in the relative share of public sector resulting from inevitable centralization of economic functions is due to growing needs for economic development vis-à-vis an increasing need for government to improve agriculture and social welfare of the people. In his own opinion towards the end of his analysis, Wagner contends that in a situation where market failure is evident, government expenditure must be geared up in order to accentuate economic development of the state (Wagner, A., 1883)

The Wiseman Peacock Displacement Hypothesis

The wise man peacock displacement hypothesis was developed by Wiseman and peacock (1961). The Hypothesis is rooted in and linked to the Wagner's law of expending state theory but with some little differences. The Wiseman – Peacock hypothesis argued on the premise that given a normal or ideal conditions of peace and

economic stability, there will be a relative limit to government spending. Contrarily, there will be an increase in government expenditures in a condition of instability and un-peaceful environment. These change art bombed by 'tolerable' limits of taxation.

They also argued that during calamitous and crisis situation such as war, famine, drought etc, people do not mind to pay higher taxes and maintain that increase in taxation permanently as far as the situation persisted. Thus government expenditure overtime appear to be like chains of plateaus disjointed by peaks.

According to Wagner, industrialization and modernization will result to substituting public activities for private. While all other function of the "fractional government is shifted to the private sector. According to Wagner, law and order function and contractual enforcement of law and order are left with the government and these will be on the increase.

Second, there will be expansion of the income and "culture and welfare" expenditure due to increase in real income. As posited by Wagner, education and culture are two areas in which the state could better be involved in their provision. The expansion in government expenditure can always be recorded after there have been provisions for the needs of the people and the people are satisfied and there is a growth in consumption pattern of the people. This will be followed by expansion in other activities such as education and culture. Wiseman and peacock (1961)

Thirdly the governments have to break the powers of natural monopolies and their activities. The breaking of the natural monopoly power such as in railroad, electricity, water boards etc, will involves taken over such ventures from the private sector (companies). Government has to finance the running of these huge capital ventures and run it efficiently, hence the increase in government expenditure (Magnus,1990)

One important aspect to note is that most of the original propositions of Wagner are not contained in the Wagner's law based on the general trend that he predicted. Evidently, with the new trends of increasing availability of data in underdeveloped countries the law has been subjected to series of tests while the results are mixed and its examination are subjected to series of rigorous and sophisticated econometric analysis.

In the Previous research works conducted by Martin and Lewis (1956), using cross sectional data, they found out that public expenditure particularly in the United States is in Jerks or step – wise fashion instead of a smooth and continuous manner. They posited that if catastrophes struck at different time leading to calamitous incidence like war, famine and large scale disturbances they will in turn provokes the need for increased public expenditure that tend to exceed accepted level of budgetary allocation and make people to accept a rise in taxes. People get so used to new tax burden during the crisis situation to the extent that even if the tax rates are reduced after the conflict, the rate does not fall back to the level it was prior to the conflict.

The resultant effect is a new and high government revenue and expenditure that replaces the old one.

The Critical – Limit Hypothesis

The critical – limit hypothesis posited that inflation rate would take its natural course and in spite of the fact that as the case may be, the country is operating a balanced budget; when the share of the government sectorial activities have exceeds 25 % of the total activity in the economy. Put in another way, if the overall economic activities of the government (public sector) reaches or surpasses the theoretical limit of 25 percent, majority, most especially the working class will be affected due to a reduction in incentives as a result of a perceptible high tax incidence as a result of reduction in the

level of production and supply. Based on the above, the general outcome of the disparity between demand and supply would hitherto increase the inflationary spiral in the economy.

The Theory of Expenditure Growth by W.W Rostow Theory

In 1978, Rostow propounded a theory on expenditure growth and posted that income elasticity of demand for public services may be altered at three stage of people's per capita income.

First, is the preindustrial society stage called the lower stage. At the lower stage demand for public service would be relatively low at very lower ebb. The reason is that people's income is channeled towards satisfying their primary needs.

Second, at lower level of public expenditure per capita income begins to rise, demand for public goods such as health, education, electricity, transport and communication, defense and the likes as supplied by the government will start to rise, this will force government to raise the expenditure on such goods.

The final stage is typical of the advanced economics. This stage is characterized by high level capita income. At this stage the rate of public sector growth do falls because more of the basic needs of the people must be satisfied.

According to Rostow (1978), all these stages do exert some level of influences on government expenditure and public sector management. At the lower level high level of investment is required to ginger up accelerated economic development so as to provide the basic and necessary infrastructural facilities to aid economic growth and break-through. There and then, the economy demands will prompt government to

increase public expenditure (Risen, 1995; Agiobenebo, 1998; Onu Chukwu, 2001; and Offurum, 2005).

The above theories and models are characterized with some major drawbacks. First, is the fact that instead of discussing and providing insights or explanations into the causal factors, they tend to describe and placed their discussions on observed situations. Secondly, they all take into cognition changes in the level of economic development but did not take their time to discuss what really caused the changes. On a more realistic note, it will be unrealistic to place emphasis on natural factors as causes of increased government expenditure knowing full well that nature does not create thing evenly. Those assumptions do not really tell us the reason(s) that makes a country to growth faster than the other. Even, if we take into cognition the role of nature, or natural factors, as well as efficiency in the management of public expenditure, the question remains, which of the theories and model discussed really suits the import of natural environment or where natural environment comes into

force.

The Keynesian and the endogenous growth model would be the basic framework of this study. According to the Keynesians, increase or expansion in government expenditure accelerates economic growth while the endogenous growth models do not place many emphases on the place, role or influence of government in the growth process. Several literatures such as Barro (1990), Barro, and Salat (1992); Easterly and Rebelo, (1993) all have reiterates the importance of government activities or policy in economic growth. Other scholars like Kneller, Bleancy and Gernmell, (1999) all had discussed productive and unproductive components of government expenditure. While others like Nijkam, and Poot, (2004) posited that apart from the earlier mentioned, the composition

of government expenditure may perhaps invoke much pressure compared to the level of government expenditure.

Base on above discussions, it can be inferred that the major determinants of economic growth are the level and composition of government expenditure.

The Keynesian Theory

Keynes has been the most formidable and astute theorist of public expenditure. Among all economists, the work of Lord Meynes Keynes is distinct and applauded because of his obvious differentiating perspective on the relationship. To Keynes, public expenditure is an exogenous component that is applicable as policy instrument to advance and accelerate economic growth. The Keynesian theory emphasized that public expenditure can contribute emphatically toward economic growth and advancement. Along these lines, a rise in government consumption is at the risk of inciting a rise in economic variables such as investment, employment, productivity and profitability through a multiplier effect on total aggregate demand. Based on this government utilizes and improves total interest, which affects and extends general output subject to expenditure multipliers (Keynes, 1936).

2.4   Determinant of Economic Growth

This section focuses on those variables that determine economic growth. The recourse to this section is due to the fact there is a need to understand or be exposed to those variables that determines economic growth and how most government expenditure most especially has been able to influence economic growth.

According to the classical, natural resources such as arable land, forest, oil and gas, the atmosphere and climatic environment, and many others are components of economic growth. Sachs and Warner (1995) noted that abundant natural resources, instead of

being an elixir of life, tend to be a poison to economies due to some reasons. First is the Dutch disease or syndrome emanating from overvalue of exchange rates, wasteful consumption, poor public investment behaviour, inability to develop a profitable export-oriental or import competing manufacturing sector, rent seeking behaviours and other unproductive activities and the dwindling nature of prices of natural resources (such as oil and gas) at the global market.

Natural resources on the contrary, can also be a positive contributor to economic growth (barro and Sala-i-Martin, (1995). A good example is the oil boom era in the 1970s in Nigeria where apart from being the major export of the Nigerian economy, income generated from petroleum resources are used in channeling developmental programs in the country.

Another factor that will be considered in this review is population growth. The classical economists argued that a country's absolute productive capacity is directly related to the size of its population. Other economist from Malthus to Solow (1957) and Swan (1956) believed that the rate of population slow down the rate of growth in poorer the countries.

On the other hand, Kuznets (1959) postulated that if there is accelerated population growth, there will be accelerated growth rate of per capital output and later on, further accelerates growth in per capital output provided that rate of growth per capital output does not decline. Also, when the rate of growth of both population and per capital is steady, the growth rate total product tends to be constrained. And, if the growth rate of population starts to slow; there will be a retarded growth rate in total output, unless the growth rate of per capital product begins at that point to increase a case which is unlikely.

Another determinant of economic growth that will be focused on is Human capital. In many of the endogenous growth models, human capital is considered to be of extreme importance. It is also considered as one of the key extension of the neo-classical growth model (Lucas, 1988; Romar, 1990; Bils and Klenow 2000). Human capital generally mean total number of people with acquired skills and knowledge acquired through education and training that are ready to apply their skills to the development of the economy.

In Barro, (1991, 2001); Mankiw, Romar and Weil, (1992); Miller and Upadhyay, (2000), it was conjectured that the quality of human capital resides in the total amount of public investment in education, culture and health services and non-rival consumption and free supply (Teal, 2001). According to Todaro (2007), human capitals do go a long way in contributing to economic growth when such capital is linked to good governance accompanied by stable political regimes.

Another factor advanced by the neo-classical economists and the endogenous growth model centered on investment. Investment in this respect is measured as the ratio of investment to GDP; the neoclassicals modeled investment to have had impact in the transitional period while it was more of permanent effect in the endogenous growth models.

Growth model writers such as Baro (1991; 1997), Fisher (1993), Easterly and Rebelo (1993) Loyaza et al (2004) among others contends that the determinant of economic growth cannot be discussed without mentioning the nature of economic policies and macroeconomic conditions inherent in the system. As upheld in Fisher (1993), there are several ways that economic policies can impact economic growth. These include among others, population of the educated citizens of that country, amount infrastructure available, improvement of political and the legal institutions in operation. These are

presumed to be necessary but not sufficient conditions that could propel economic growth. In general terms, instability in the macroeconomic environment will go a long way to ensure a favourable economic growth. As espoused in Fisher and Modigliani, (1978); Sala-i-Martin, (1991), Levine ad Renelt, (1993), Cozier and Selody, (1992), Clark, (1993), and Barro, (1996), there are several macroeconomic factors but the most important of them are inflation (measured in terms of consumer price index) Fiscal policy (measured in terms of government consumption/GDP), Unemployment (seen as total percentage of total Labour force), budget deficits (measured in term of deficit/GDP) and tax burdens (measured as quota, direct taxes/GDP), real interest rate (In %) current account balance (% of GDP) and effective exchange rate (in index).

Another determinant that is considered is government factors (measure in term of government consumption/GDP), recurrent expenditure and capital expenditure).
According to Barro (1989, 1990, and 1991), government expenditure carries a larger share of total GDP. (Defence and education not included); the larger the level of government spending, the lower the level of investment and growth.

Financial system (measured in term of broad money/GDP, credit to the private sector/GDP, currency/GDP, domestic credit provided by banking sector/GDP, turnover ratio, stock market capitalization of listed companies/GDP, stock traded/GDP, and currency/M_2) also exert influence of economic growth. As maintained in Levire and Zervos (1993), countries with efficient and highly developed financial system are capable of channeling savings towards investment which will in turn generate more productivity; increase potential savings rates and promotes accelerated growth.

Another factor that determines economic growth is foreign Aid (measured in term of Aid per capital, Aid/GDP. There are many literatures that attested to this fact. For

example, Ibrahim et al (2008) in their research concluded that foreign aid is contributes greatly to economic growth especially during the time of peace. On the other hand, in a study conducted by Boone (1994) using data generate among 97 countries from 1971 to 1990, it was found out that "there were no significant correlation between foreign aid and growth in the countries tested". The study conducted by Vasquez (1998) also attested to this. Using data obtained from 73 countries between 1970 and 1995, it was found out, there is a negative correlation between both aids per capita and aids as a percentage of GDP and economic growth. The justification for the above could be seen in the sense that aid to developing countries had focused primarily on two areas that are critical to economic development, that is, education and health care, meanwhile, aid had failed to uplift these areas.

Information and knowledge are recently considered as another addendum to determinant of economic growth. Empirically, knowledge is measured by focusing on skill levels, research and development. Research evidence had shown that R & D activities flourished in advanced countries but they do not triumph in less developed economies unless they can have access to new technology.

The final determinant of economic growth to be considered in this literature review is trade openness. Globalization of economies has given strong footing for trade openness to be considered as a determinant of economic growth. More of the factor often used as determinants of economic growth in this realm is trade openness (measured in term of export/GDP export duties/total export, export-import values/GDP export prices/import prices, index of real exchange rate volatility, average tariff, non-tariff barriers, black market premium on exchange rates and sometimes dummy).

The new classical literatures theoretically held that a strong positive correlation exists between trade openness and economic growth. Trading activities is carried out through

various channels like exploration of comparative advantages, technological transfer, and diffusion of knowledge among countries, increasing economies of scale, improved efficiency due to exposition to competition and increasing incentive to technological innovation. (Piazolo, 1995, Harrison 1996; Frankel and Romar, 1999). Openness of trade accelerates economic growth as compared to countries that closes their market to others. Countries that close their markets do experience slow growth (Weil, 2005).

Several economic literatures such as Frankel and Romar, 1999; Sukar and Rama Krisha, 2002; Yamikkay, 2003) had attested and concluded that economies that countries that open their economies to foreign trade and allows capital inflow and outflow do experience higher GDP per capita and grows more rapidly and faster. On the contrary, a critical analysis of trade openness by Rodriquez and Rodrik (1999) questioned the place of trade openness in economic growth. To them there are some considerable negative and statistical significance between average tariff rates and economic growth. Also in (Harrison, 1996), it was maintained that trade openness generate some sort of competitions that may discourage innovation by making investment in research and development less profitable. As such, trade openness does not promote economic growth in under developing countries.

From the literature review above, conclusions for this study can be drawn that the determinant of economic growth all things being equal includes, Human capital, technology and innovation, political factors (such as political rights), socio-cultural factors, geographical, demographic factors and volatility of investments, trade openness, foreign aid economic policies and macro-economic factors foreign directinvestments and governmental factors (for example, property rights). From the literature review it was found out that most of these factors have significant correlation with economic growth while some do not have. For example, the relationship between

investment and economic growth is either positive or negative (this could be due to political factors both internally or internationally, which may distorts the trend of investment positively or negatively. However, and, as pointed out in Weil (2005), policy variables such as sound macroeconomic policies (stable and low level inflation), trade openness, institutional policies and financial developments are believed to have strong positive relationship with economic growth; and they are worth to be taking note of.

In the above discussions, researchers have scrutinized the relationship between many of the determinants of economic growth and economic growth; however there are few widely agreed results. Keynes (1936) contended that the way out for economic crisis is to encourage companies to invest in the economy while the government produces the enabling environment, investment in infrastructures and strong capital base. The statement reiterating that increased public spending will promote economic growth is not supported by all the theorists. The argument advanced by Sachs (2006) was that of the developed countries, those with higher tax rates and higher welfare spending are better in most processes of economic performances as in comparison with countries with low tax rates and lower social costs. This is supported by Sudhaaussi (2007) who seems to agree with the argument that countries with the large public sectors and branches grew more slowly.

2.5   Empirical Literature Review

Relevant literatures linking government expenditure and economic growth are reviewed in this section. The section is divided into (i) cross countries evidence and,

(ii) the case of Nigeria

Cross countries Evidence

Barro, (1990) in his seminar work was able to open a new ground toward estimating the impact of government expenditure (fiscal policy) on economic growth. Following his footsteps are Barro and Sala-i-Martin (1992), Easterly and Rebelo (1993) and, Brons, Groot and Nijkamp (1999). In their works they maintained that government expenditure (activities) exerts influence on economic growth. In the sample spirit, Dar Atul and Amirkhalkhali (2002) premised that in order to predict future, it is very crucial to use the endogenous growth model.

One research that seems to be of interest to many academia on the relationship between government spending and economic growth is that of Laudau (1993). He applied data obtained from 93countries to investigate the impact of government expenditure on economic growth. He later discovered that government expenditure negatively impacted on economic growth. To support his claim, Komain and Brahnsren (2007) carried a Granger Causality test to examine the relationship that exists between public expenditure and economic growth. They submitted that no cointegration exists between government expenditure and growth. More so, their results revealed that there is a unidirectional relationship as causality runs from government expenditure to growth. So also, in their result, it was shown that government expenditure has a significant positive effect on growth.

In another study carried out by Olugbenga and Owoeye (2007) to investigate if there exist any relationship between government expenditure and economic growth. Data for the study were gotten from 30 under-developing economies between the period 1970 and 2005. After employing regression analysis; the regression shows an existence of a long-run relationship between government expenditure and economic growth. The

study also shows that in 16 out of the 30 countries under investigation a unidirectional causality exists between economic growth and government expenditure; this result greatly supported the Keynesian hypothesis. Also, in their work, causality runs from economic growth to government expenditure in 10 out of the countries studied, confirmed Wagner's law in a group of four countries they found existence of feedback relationship between government expenditure and economic growth.

Folster and Henrekson (2001) conducted a study and employed different econometric methodologies to look at the relationship between government expenditure and economic growth among a sample of advanced and richer economies from 1970 to 1995. The outcome of their study generated more meaningful (robust) results. Further study was carried out on India by Ranja and Sharma (2008) on effect of government development expenditure on economic growth between 1950 and 2007. The study discovered that government expenditure has a significant positive impact on economic growth. They also found out that there exists the presence of co-integrated among the variables tested. In his own study of Saudi Arabia, Al-Yousif (2000) reported that government expenditure has a positive significant impact on economic growth. While studying the linkage between government expenditure and economic growth for a group of 115 countries, between 1950-1980, Ram (1986) using both cross sectional, time series data for analysis, submitted that government expenditure has a positive influence on economic growth.

The Case of Nigeria

In Nigeria, there are many studies that have been carried out to examine the relationship between government expenditure and economic growth vis-à-vis the impact there of.

Fajingbesi and Odusola (1999) used econometric models to examine the relationship between government expenditure and economic growth and their result shows that real government capital expenditure has a significant impact on real GDP. But the effect of real government capital expenditure on growth was relatively small. Onyinlola (1993) on the other hand investigated the relationship between defense expenditure on economic growth in Nigeria. The results then show that the relationship between defense expenditure is positive.

Studies out carried out by researchers like Maku (2009), Nurudeen and Usman (2010) of recent shows some mixed findings. For example, study by Nurudeen and Usman (2010) concluded that total government recurrent expenditure and capital expenditure effects growth significantly while the impact of education expenditure on growth was negative. But transport and communication and health expenditure produced a positive effect on growth.

In the regression analysis undertaken by Ekpo (1995) Ordinary Least Square method was used to estimate a number of disaggregated data of government capital expenditure on private investment starting from 1960 to 1990. The outcome of the study shows that capital expenditure variable such as transport and communication, agriculture, health and education do exert some positive influence on private investment in Nigeria and consistently promotes growth rate in the country. On the negative side, government capital expenditure on construction and manufacturing crowded out private investments. By implication, it means that it is better that the private sector should be left alone to invest in construction and manufacturing than in the hand of public sectors.

A research study conducted by Ogiogio (1995) examined the impact of recurrent, capital and sectorial expenditure in the period from 1970 to 1993. The study took a cursory

examination of the existing long run relationship between economic growth and government expenditure. The result show that capital expenditure has little significance effect than contemporary government recurrent expenditure while is there is more growth indices in the five years lag of capital expenditure.

In the final analysis the study was of the submission that for government investment expenditure to be more effective there should be at least a five year planning horizon. Finally, it was fond out in the study that provision of basic socio-economic infrastructures and favorable environment is what will enhance investment and lead to economic growth.

In an attempt to avoid the problem of bi-causality in the relationship between government expenditure and economic growth, Odusola (1996) was able to adopt a simultaneous equation model to explain the relationship between military expenditure and economic growth in Nigeria. The study then found out that aggregate military expenditure has a negative relationship with economic growth at 10 percent significance level. In the study also after decomposing the data into recurrent and capital military expenditures, it was discovered that capital military expenditure was down faster than recurrent expenditure. This may be due to the military exigencies of those years between 1983 and 1999. Base on the findings it was recommended that resources that are spend on military should be diversified into other sectors in order to bring about positive impacts or effects on the economy. Contrary, Oyinlola (1993) while examine the expenditure and economic growth in Nigeria, his finding defense expenditures exerts positive impact on economic growth.

CHAPTER THREE

METHODOLOGY

3.1: Introduction

The chapter described the methods of data collection, presentation and analysis. In the chapter, the theoretical framework and the model for the study were developed and clearly specified. It consists of the model which specified the functional relationship between economic variables used in the study. The techniques used in analyzing the data, the sources of data and method used in the collection of data are all stated.

3.2 Model Specification.

To carry out an empirical investigation on the impact government expenditure on economic growth in Nigeria, the model for the study is built on the neoclassical production function and it is formulated as follows:

$$Y=f(K,L)………………………..…………………………………………..(3.1)$$

Where,

Y represents aggregate output,

K represent total stock of domestic physical capital, and, L

represents total labour force.

The model, following Feder (1983) and Ram (1986) specification incorporates government (G) into the equation as an independent variable and re-formulated the model as;

$$Y = f(K,L,G)\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(3.2)$$

Government expenditure on capital formation can be divided into a capital component (CAP) and a recurrent component (REC), denoting monies spent on infrastructure as capital and monies spent maintaining the economy which is recurrent, Equation (3.2) is specified as:

$$Y = g(K,L,CAP,REC,)\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(3.3)$$

We then take the total derivatives and normalize, using the Gross Domestic Product (Y) in order to obtain the Marginal Product of Capital (MP$_K$), Marginal Product of Labour (MP$_L$) and government expenditure on capital formation. This is presented below as;

$$\frac{\delta Y}{Y} = \left(\frac{\delta Y}{aK}\right)\frac{\delta K}{Y} + \left(\frac{\delta Y}{aL}\right)\frac{\delta L}{Y} + \left(\frac{\delta Y}{\delta CAP}\right)\frac{\delta CAP}{Y} + \left(\frac{\delta Y}{\delta REC}\right)\frac{\delta REC}{Y}\ldots\ldots\ldots\ldots(3.4)$$

From the Above, $\frac{\delta Y}{Y} = Y$,

$$\frac{\delta Y}{\delta K} = \alpha_1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\frac{\delta K}{\delta Y} = K,$$

$$\frac{\delta Y}{\delta L} = \alpha_2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\frac{\delta L}{\delta Y} = L,$$

$$\frac{\delta Y}{\delta CAP} = \alpha_3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\frac{\delta CAP}{\delta Y} = CAP,$$

$$\frac{\delta Y}{\delta REC} = \alpha_4 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\frac{\delta REC}{\delta Y} = REC$$

Based on equation (3.4) the signs of all partial derivatives with respect to output are expected to be positive. With reference to neo-classical production function, capital and labour influence growth positively. Feder (1982) and Ram (1986) posits a positive

relationship between government expenditure and economic growth. The reason is that

private Investment, Labour force, Government and recurrent

expenditure are all predicted to exert positive impact on economic growth.

Hence, in its explicit form, Equation (3.4) assumes the following functional form:

$$GDP_t = \alpha_0 + \alpha_1 K_t + \alpha_2 L_t + \alpha_3 CAP_t + \alpha_4 REC_t + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots (3.5)$$

3.2.1 Economic Growth

The dependent variable for the study is Economic growth. Economic growth is basically

an increase in the capacity of an economy to produce goods and services, compared

from one period of time to another. According to Rutherford (2002), Economic growth

is defined as the growth in the total or per capita output of an economy often measured

by an increase in real GDP and caused by an increase in the supply of factors of

production or their productivity. Though variables like real output per capita and growth

in real gross domestic product can be used to measure economic growth, this study

would proxy economic growth with growth in real GDP per capita. The choice of this

variable is based on the fact that it is widely recognized as a good measure of the

economic value of a nation's output and income. The real GDP per capita variable will

be the dependent variable in the model.

3.2.2 Explanatory variables for the study

Gross Domestic Investment

Physical capital stock is an important factor in the production process and an aggregate

production function depicts quality capital as both a major condition for economic

growth (Mincer, 1981). The quality capital is significant to the economic progress of

28

any economy, because the quality of capital tends to improve economic growth. An increase in a nation's capital investments has direct impact on its real GDP. This is because higher capital accumulation by way of investment invariably increases capital per worker and this embodies technological improvement,

acquisition of sufficient skills and training to efficiently use new capital inputs. This would consequently lead to a higher level of productivity. This study will proxy the amount of capital stock with the real gross domestic investment as a percentage of GDP. The theoretical and empirical evidence suggest a positive relationship between economic growth and capital stock, therefore the coefficient of gross domestic investment is expected to be positive (Romer, 1986; Rebelo, 1991; Hoover and Perez, 2004).

Labour Force

The size and quality of the labour force is very critical in the assessment of any country's potential economic growth model. Labour force is the total labour stock or currently active population of all persons who met the requirement for inclusion among the employed or unemployed during a specific period (Shim et al., 1995). Total labour force thus comprises people of ages 15 and older who meet the International Labour Organization definition of the economically active population: all people who supply labour for the production of goods and services during a specified period. It therefore includes both the employed and the unemployed. Theoretically, the classical growth model suggests a positive relationship between economic growth and the stock of productive labour in any economy, therefore its coefficient is expected to be positive.According to toTodaro (2006), "the higher the labour force, the higher the supply of labour and the higher the output".

Government Expenditure

Government expenditure is government purchase of goods and services for current or future use (Shim J.K et al., 1995). Government expenditure on capital formation can be divided into capital component and recurrent component denoting monies spent on infrastructure as capital and monies spent to maintain the economy respectively. The relationship between government expenditure and economic growth is very significant for developing countries; most of which have experienced increasing levels of government expenditure over a period. Government consumption is a component of gross domestic product. All other things held constant, government expenditure on consumption related goods and services may impact negatively on the growth of the economy whiles that of investment related goods and services will increase GDP since it contributes to current demand. The study expects the coefficient of government consumption to be positive.

3.3 Sources and Methods of Data Collection

Based on the objective of the study, only secondary data are used. Conversely, the secondary data involve an examination of already existing data from WDI, The National Bureau Of Statistics and CBN statistical bulletin on Nigeria for the period of 1981-2013.

3.4 Estimation Techniques

This study employed the ADF and Philips-Perron (PP) unit root test, Johansen cointegration test, VAR model, impulse response function and variance decomposition. They are discussed as follows

3.4.1 Unit Root Test

In so far that time series data are used for analysis, it is necessary to test for stationarity of individual data series to ascertain if they are stationary and are in order of integration.

To carry out a prior diagnostic test before the estimation of the model so as to scrutinize the time series properties of the series, two standard procedures for unit root test are employed. These are the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) tests. The reason for this is to circumvent or avoid the problem of spurious results that are common with non-stationary time series models

Co-integration Estimation

In an attempt to determine the number of cointegrating vectors, the Johansson's methodology is employed using two distinct test statistics. These are the trace test statistics and the maximum Eigen – value test statistics. The trace statistics is used to test the null hypothesis so that the number of divergent cointegrating relationship is equal to or less than "r" against the alternative hypothesisof more than "r" cointegrating relationship. This is defined as;

$$\lambda_{trace}(r) = -T \sum_{j=r+1}^{P} 1 n(1 - \hat{\lambda}_j) \qquad 3.6$$

The maximum likelihood ratio or the maximum Eigen-value statistic, for testing the null hypothesis of at most 'r' co-integrating vectors against the alternative hypothesis of 'r+l 'co-integrating vectors, is given by:

$$\lambda_{max}(r, r+1) = -T n1 (1 - \hat{\lambda}_{r+1}) \qquad 3.7$$

Where, $\hat{\lambda}_j$ is the Eigen values, T is total number of observations. According toJohansen, under the null hypothesis both trace and statistics have nonstandard distributions and helps gives approximate critical values for the statistics as generated by Monte Carlo methods. In a situation where Trace and Maximum Eigen-value

31

statistics yield different results, the results of trace test should be preferred.

3.4.2 Vector Autoregression Model (VAR)

Following the result of the cointegration test, the study employed VAR model so as to estimate the short run properties of the model specified. This technique becomes appropriate when the result of the cointegration test presents existence of no cointegration among the variables examined, otherwise the vector error correction model (VECM) should be applied. Hence, the regression equation form for VAR is stated as follows:

$$Y_t = \alpha_1 + Pe_1 + \sum_{i=0}^{n} \beta_{i} Y_{t} + \sum_{i=0}^{n} \emptyset X_i + \sum_{i=0}^{n} YZ_{it} \qquad 3.8$$

$$X_t = \alpha_2 + Pe_2 + \sum_{i=0}^{n} \beta_{i} Y_{t} + \sum_{i=0}^{n} \emptyset X_i + \sum_{i=0}^{n} YZ_{it} \qquad 3.9$$

In VAR, the number of cointegrating vectors is shown by the cointegrating ranks. For illustrative purpose, two line independent combinations of the non- stationary variable that will be stationary will be shown by a rank of two.

32

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF

RESULTS

4.1   Introduction

The chapter dwells on data presentation and estimation of the specified regression model.

4.2   Unit Root Test

The result of the stationarity test conducted on each variables explained in the model using ADF and PP techniques in testing the hypotheses of unit root or no unit root as the case may be is presented in table 4.1 below;

Table 4.1: Unit Root Test

Variables	ADF	PP		ADF	PP	Order of Integration
	@ LEVEL			@ 1ST DIFFERENCE		
LGDP	-0.040152	-0.011064	Non-stationary	-5.304311	-5.326225	I(1)
LK	-0.653814	-0.763305	Non-stationary	-4.244540	-4.056745	I(1)
LL	-2.140401	-2.140401	Non-stationary	-7.974809	-8.019804	I(1)
LCAP	-0.946501	-0.945137	Non-stationary	-5.785863	-5.780104	I(1)
LREC	-0.718421	-0.720467	Non-stationary	-5.785863	-5.780104	I(1)
Critical Values: 10% 5% 1%	-3.653730 -2.957110 -2.617434	-3.661661 -2.960411 -2.619160		-3.653730 -2.957110 -2.617434	-3.661661 -2.960411 -2.619160	

Note: *statistically significant 1% significant level

Table 4.1 above depicts the unit root test result which revealed that, LGDP, LK, LL, LCAP and LREC were all not stationary at levels. After the first difference, all the variables were discovered and found to be integrated of order 1. That is, they are 1 (1)

variables. This stationarity result then means that there is a need for a test for long term relationship between the variables.

4.3   Lag Selection Criteria

In order to select the optimal lag length, the Schwartz Information Criteria was used in selecting the optimal lag length as guided by the information given by the test conducted.   The result presented in table 4.2 revealed that one (1) lag length is appropriate for the analysis as supported by the entire information criterion used.

Table 4.2: VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria						
Endogenous variables: LGDP LK LL LCAP LREC						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-77.16014	NA	0.000138	5.300654	5.531943	5.376049
1	65.87343	230.6993*	6.97e-08*	-2.314415*	-0.926685*	-1.862050*
2	86.65271	26.81197	1.05e-07	-2.042110	0.502061	-1.212774
* indicates lag order selected by the criterion						

LR: sequential modified LR test statistic (each test at 5% level)
 FPE: Final prediction errorAIC: Akaike information criterion
 SC: Schwarz information criterionHQ: Hannan-Quinn information criterion

4.4   Cointegration Test

In this section, the existences of long run equilibrium relationship among the variables are determined. A vector of variables integrated of order one (1) is cointegrated if there exists linear combination of the variables, which are stationary. The maximal Eigen-value and the trace Statistics are the two likelihood ratio test statistics employed so as to determine the total numbers of cointegrating vectors in line with Johansen and Juselins (1990) approach. The results of these two likelihood tests statistics for the two models were presented in Table 4.3 below.

Table 4.3: Cointegration Test Results: The Johansen-Juselius Approach

Series: LGDP LK LL LCAP LREC				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.610270	62.39959	69.81889	0.1692
At most 1	0.370967	33.18824	47.85613	0.5464
At most 2	0.316395	18.81750	29.79707	0.5061
At most 3	0.132743	7.025876	15.49471	0.5746
At most 4	0.080772	2.610869	3.841466	0.1061
Trace test indicates no cointegration 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		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.610270	29.21135	33.87687	0.1630
At most 1	0.370967	14.37074	27.58434	0.7962
At most 2	0.316395	11.79163	21.13162	0.5684
At most 3	0.132743	4.415006	14.26460	0.8131
At most 4	0.080772	2.610869	3.841466	0.1061
Max-eigenvalue test indicates no Cointegration at the 0.05 level* denotes rejection of the hypothesis at the 0.05 level**MacKinnon-Haug-Michelis (1999) p-values				

The presence of cointegrating vectors was shown in table above for both the test statistics and the maximal Eigen value at the 5% level of significance. This is the main reason why VAR was adopted in order to examine the direct effect of government expenditure on economic growth in Nigeria. Since there was nonexistence of co-integration it then means that there exist short-run relationships between variables.

4.5 Results of the VAR Model

35

Table 4.4 Vector Auto Regression Estimates

	Dependent variable (LGDP)		
	Coefficient	Standard error	T – statistics
LGDP(-1)	0.706340***	0.18806	3.75584
LGDP(-2)	0.491177**	0.20854	2.35532
LK(-1)	0.075879	0.25559	0.29687
LK(-2)	0.265683	0.23258	1.14233
LL(-1)	0.297286	0.34659	0.85774
LL(-2)	0.097475	0.34439	0.28304
LCAP(-1)	0.057765	0.15185	-0.38041
LCAP(-2)	0.322402**	0.14630	2.20369
LREC(-1)	0.319355**	0.11566	2.76119
LREC(-2)	0.180665	0.11420	1.58197
C	-4.446568	5.17143	-0.85983
R-squared	0.984933		
Adj. R-squared	0.973899		
F-statistic	489.7028**		

Note: *, **, *** denotes rejection the null hypothesis at 10%, 5% and 1% significant

levels

Table 4.4 provides results for the VAR regression since there was no evidence of long

run relationship among the variables in the study.

From the results, the lags of economic growth have positive and significant impact on

current economic growth such that in the short run, a unit increase in previous values

of economic growth would significantly increase current economic growth by about

0.706340 units and 0.491177 units at lags 1 and 2 respectively.

On the other hand, capital and labour were both positive but insignificant. Hence in this

study, we fail to reject the null hypothesis that capital and labour do not affect economic

growth.

With respect to the variable of focus, government expenditure on capital in the form of

capital account has a positive but insignificant impact at lag one while at lag two, the

effect of positive and statistically significant at 5 percent level. Hence previous values of government capital expenditure enhance economic growth in the short run.

Finally, the study finds evidence of a positive and significant impact of government recurrent expenditure on economic growth at lag one while that of lag two also positive as expected but insignificant. Hence immediate past values of recurrent government expenditure enhance economic growth as well.

With a significant F-statistics, the model is statistically significant and as such about 98 percent of the variations in economic growth is explained by the variations in the independent variables.

Since the LGDP vector among the system of equations as the dependent variable are been considered, the LGDP equation is re-estimated as OLS, as shown in the table below.

4.6: Results of the OLS-VAR

Table 4.5: Results of the OLS-VAR Model

Dependent Variable: LGDP				
LGDP = C(1)*LGDP(-1) + C(2)*LGDP(-2) + C(3)*LK(-1) + C(4)*LK(-2) + C(5) *LL(-1) + C(6)*LL(-2) + C(7)*LCAP(-1) + C(8)*LCAP(-2) + C(9)*LREC(-1) + C(10)*LREC(-2) + C(11)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.706340	0.188064	3.755844	0.0012
C(2)	0.491177	0.208539	2.355322	0.0288
C(3)	0.127678	0.055592	2.296874	0.0496
C(4)	0.069799	0.032581	2.142326	0.0368
C(5)	0.297286	0.346592	0.857740	0.4012
C(6)	0.097475	0.344389	0.283038	0.7801
C(7)	0.319355	0.115658	2.761195	0.0120
C(8)	0.322402	0.146301	2.203688	0.0394
C(9)	0.290843	0.101434	2.859833	0.0141
C(10)	0.294834	0.114202	2.581974	0.0293
C(11)	0.057765	0.151850	-0.380410	0.7077
R-squared	0.984933	F-statistic		489.7028

Adjusted R-squared	0.973899	Prob(F-statistic)	0.000000
Durbin-Watson stat	2.008709		

Table 4, 5 shows that all the first and second lag of the explanatory variables positively exerts some influences on economic growth at 0.05 level of significance, in the period under consideration. With the significant level of the variables, lag one and two of LK, LCAP and log of LREC all significantly contribute positively to economic growth in Nigeria. The coefficient of determination (R^2) which gives 0.984933 indicates that the model explains 98 percent of the variations in LGDP. This shows a very good fit as only about 2% variation in LGDP is left accounted for by the model. The Durbin-Watson statistic of 2.008709 is within the bounds of non-autocorrelation. The F-statistic is 489.7028. This value is significant at 1%, 5% and 10% because the calculated Prob(F-statistic) = 0.000000. With this, we reject the null hypothesis that all the explanatory variables introduced in the model are not jointly significant in explaining the variations in LGDP and conclude that they are simultaneously

significant.

4.7 Impulse Response Functions

All the reactions of the system as a function of time are clearly defined by the impulse response function (or possibly as a function of some other independent variable that parameterizes the dynamic behavior of the system). Table 4.6 therefore presents the impulse response function for the variables.

Fig.1: Impulse Response Functions

Response of LGDP to Cholesky
One S.D. Innovations

Response of LK to Cholesky
One S.D. Innovations

Response of LL to Cholesky   Response of LCAP to Cholesky One S.D. Innovations   One S.D. Innovations

Response of LREC to Cholesky One S.D. Innovations
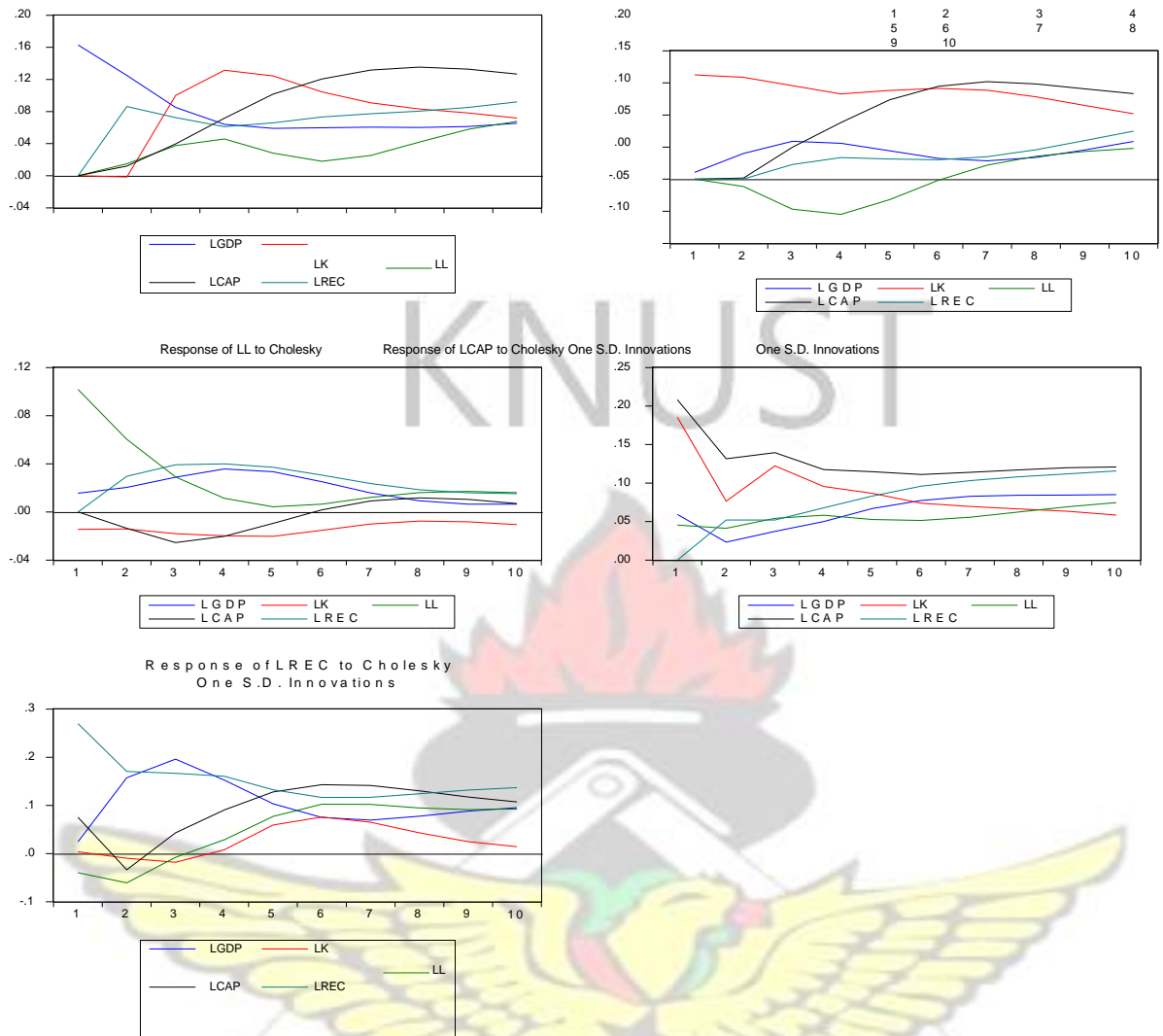
It thus depicted that a small positive shock in LGDP respond positively to itself, while LGDP respond positively to LK, LL, LCAP and LREC. This is an indication that, all the examined explanatory variables positively affect economic growth in Nigeria.

4.8 Variance Decomposition

The amount of information that each of the variables ditched out to other variables in the autoregression is indicated by the variance decomposition. It determines how much of the forecast error variance of each of the variables can be explained by exogenous shocks to the other variables.

To be able to clearly observe importance or relevance of the variables overtime some period of time, a ten year forecasting time horizon is employed for the study. For simplicity and analytical purposes the variance decomposition of LGDP presented as shown in table 4.6 below.

Table 4.6: Variance Decomposition

Variance Decomposition of LGDP:						
Period	S.E.	LGDP	LK	LL	LCAP	LREC
1	0.162985	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.223537	84.39329	0.004430	0.445859	0.290257	14.86617
3	0.274712	65.48756	1.278652	2.169186	2.281874	16.78273
4	0.328366	49.63196	2.320098	2.466728	6.360831	15.22040
5	0.377241	40.05818	3.061847	2.586315	12.10305	14.59061
6	0.420680	34.22723	3.338205	2.745596	17.93628	14.75270
7	0.461311	30.18097	3.402306	2.585268	23.06546	15.06600
8	0.499881	27.15071	4.555023	3.608562	26.96832	15.41739
9	0.536616	24.86312	4.030524	3.685221	29.53068	15.89046
10	0.571362	23.24138	4.539465	4.656542	30.95837	16.60424

Table 4.6 gives the fraction of the forecast error variance for each variable that is attributed to its own innovation and to innovations in another variable. The own shocks of LGDP constitute a significant source of variation in its forecast error in the time horizon, ranging from 100% to 23.24%. After confirming the positive relationship of the LK, LL, LCAP and LREC, variation in LGDP respectively, ten years after, variation in LGDP is accounted for by LK (4.53%), LL (4.65%), LCAP (30.95%) and LREC (16.60%) shock. It is clear that the predominant source of variation in LGDP is LCAP.

4.9 Discussion of Findings

From various empirical analysis from this study, we could deduced that, all the explanatory variables are contributing positively to the Nigerian economic growth and examining this variable individually we have;

From the findings of the study, it was discovered that there exist a positive and significant relationship between government recurrent expenditure and economic growth in Nigeria. Going by the first hypothesis formulated, the null hypothesis that says; there is no significant relationship between government recurrent expenditure and economic growth can be rejected given the probability value of the t-statistic test from table 4.7 which is less than 0.05 i.e. 0.03 and 0.01 at 5% significant level respectively for the first and second lag and we accept the alternative hypothesis that, government recurrent expenditure significantly affect economic growth in Nigeria. Therefore, it then means that, if the government expenditure rises by a percentage, it will trigger- off a 29.0% increment in total federal government recurrent expenditure and a resultant 29.4% surge in the rate of economic growth respectively during the first and second periods.

Also, the result revealed that government capital expenditure has positive and significant impact on economic growth in Nigeria. Based on the t-statistic test result, we can conveniently reject the null hypothesis that; there is no significant relationship between government capital expenditure and economic growth and accept the alternative hypothesis that; capital expenditure significantly affects economic growth in Nigeria. Hence, a percentage rise in capital expenditure will upturn economic growth by 33% and 32% increase in economic growth for the first and second period respectively.

In the same vein, capital also shows a positive and significant relationship with economic growth in Nigeria for the period of study unlike labour which shows a positive and insignificant impact on economic growth. The reason for this maybe as a result of

inadequate human capital development programmesin Nigeria which is an indication for the government to harness the opportunity of high population in the country.

Lastly, the result of the F-statistic shows the overall significant level of all the explanatory variables on economic growth in Nigeria with the probability value of 0.0000 which is less than 0.05 at 5% level of significant. This was supported by the coefficient of determination which shows that, 98% of the variation in economic growth is explained by the explanatory variables considered in the study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Public expenditure operation and management has been a principal objective of past, present administration in Nigeria. Succeeding administrations have on different occasions made attempts to direct government spending towards achieving objectives that have direct bearing on the life of the Nigerian populace (welfare considerations). The attainment of this goal is subject to both endogenous and exogenous variables. From the analysis of this study, it is palpable that government inclination towards gross expenditure influences economic growth though varying as determined by form of expenditure considered.

The chapter one of the study attempted to address the background, problem, objective and research questions. Other issues raised include: research hypotheses, significant and scope of the study. Empirical works were reviewed in chapter two and relevant related issues to the study were also reviewed. Here, objective and critical examination was given to the circumstances under which the public expenditure operates and taking position from the views of past scholars who have at one time or the other contributed to knowledge.

Chapter three examine the methodology adopted as well as method of data collection, method and tool of analysis as well as justification for the research methods used.

Chapter four presents analyses and interprets the data collected via our data collection tools. In addition, the hypotheses formulated were discussed and research findings were

intensely reported. Finally, last chapter discussed the summary, limitation, conclusion and recommendations of the study.

5.2   Recommendations

With reference to the findings of this study, the following policy options are recommended that:

i.   There an urgent need for government to make sure that both capital and recurrent expenditure are judiciously and religiously managed in such a manner that it will boost nations production base and promote economic growth and of the country.

ii.   Expenditure in all the sectors of the economy should receive increased funding (with more credence to capital expenditure). Likewise, nation's resources need to be well managed and properly channeled towards execution of projects that will promote development and growth of the economy.

iii.   Furthermore, to tackle the menace of leakages in the expenditure channel, government need to strengthen her institutions most importantly those antigraft agencies through improved funding, capacity building and orientation so as to combat corruption and corrupt practices.

iv.   Finally, public expenditure on capital and infrastructure should be boosted to encourage the private sector in job creation that would increase productivity and reduce the rising government expenditure in Nigeria.

5.3   Conclusion

v. Purposively, this study is set outto practically investigate the impact of government expenditure and economic growth using econometric modeling with annual time series covering the period 33 years (1981-2013). The study employed the Cointegration Rank test to look at the nature of the relationship between these variables and found no long run relationship between them which gave rise to estimating the model formulated using VAR techniques.

vi. Hence, the study concludes that government expenditure has a significant impact on economic growth though the significance is form dependent. i.e. the form of government expenditure considered. It was seen economic growth in Nigerian over the years has been significantly affected by both capital and recurrent expenditure but the level of their effect varies in degree and extent. This study found that capital expenditure would have really positively impacted the level of economic growth but for the issue of corruption and institutional oddity though the intended capital expenditure is indirectly converted to recurrent expenditure somehow which has its own effect on the Economic growth.

5.4   Limitations of the study

The study just concluded is faced with numerous problem one of it is how best to start the study and, or to proceed. Some of the ideals that might be relevant in this research work are trade off as a result of frustration. This research work is also faced with expenses; these may include purchase of materials, cost of internet in search for relevant and up to date materials and the cost of travelling given the scope of the study. Lastly, time has been the major problem as we are faced with other crucial commitments.

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APPENDIX

Results of the VAR Model

	LGDP	LK	LL	LCAP	LREC
LGDP(-1)	0.706340	0.192250	0.075537	-0.102445	1.006614
	(0.18806)	(0.18792)	(0.12004)	(0.33294)	(0.32783)
	[3.75584]	[1.02306]	[0.62925]	[-0.30770]	[3.07057]
LGDP(-2)	0.491177	0.026941	0.072810	0.108807	0.336105
	(0.20854)	(0.20838)	(0.13311)	(0.36918)	(0.36352)
	[2.35532]	[0.12929]	[0.54698]	[0.29472]	[0.92459]
LK(-1)	0.075879	0.956847	0.091465	0.154721	0.355396
	(0.25559)	(0.25539)	(0.16315)	(0.45248)	(0.44554)
	[0.29687]	[3.74660]	[0.56063]	[0.34194]	[0.79768]
LK(-2)	0.265683	0.308019	0.088751	0.247469	0.776363
	(0.23258)	(0.23240)	(0.14846)	(0.41174)	(0.40543)
	[1.14233]	[1.32539]	[0.59782]	[0.60103]	[1.91493]
LL(-1)	0.297286	0.116066	0.682684	0.229257	0.175093
	(0.34659)	(0.34632)	(0.22123)	(0.61358)	(0.60417)
	[0.85774]	[0.33514]	[3.08583]	[0.37364]	[0.28981]
LL(-2)	0.097475	0.387932	0.014021	0.102363	0.235216
	(0.34439)	(0.34412)	(0.21983)	(0.60968)	(0.60033)
	[0.28304]	[1.12732]	[0.06378]	[0.16790]	[0.39181]
LCAP(-1)	0.057765	0.008064	-0.104915	0.561943	-0.391119
	(0.15185)	(0.15173)	(0.09693)	(0.26882)	(0.26470)
	[-0.38041]	[0.05315]	[-1.08241]	[2.09038]	[-1.47760]
LCAP(-2)	0.322402	0.195123	0.002115	0.378666	0.487142
	(0.14630)	(0.14619)	(0.09339)	(0.25900)	(0.25503)
	[2.20369]	[1.33476]	[0.02265]	[1.46203]	[1.91016]
LREC(-1)	0.319355	0.000671	0.109768	0.192666	0.631526
	(0.11566)	(0.11557)	(0.07383)	(0.20475)	(0.20161)

	[2.76119]	[0.00581]	[1.48685]	[0.94097]	[3.13239]
LREC(-2)	0.180665	0.032796	-0.003264	-0.029390	-0.009064
	(0.11420)	(0.11411)	(0.07290)	(0.20218)	(0.19907)
	[1.58197]	[0.28740]	[-0.04478]	[-0.14537]	[-0.04553]
C	-4.446568	8.489841	5.749273	-4.785545	-2.661634
	(5.17143)	(5.16737)	(3.30097)	(9.15513)	(9.01465)
	[-0.85983]	[1.64297]	[1.74169]	[-0.52272]	[-0.29526]
R-squared	0.984933	0.996827	0.711687	0.987741	0.985053
Adj. R-squared	0.973899	0.995241	0.567531	0.981612	0.977579
F-statistic	489.7028	628.3982	4.936917	161.1493	131.8056

OLS estimates

Dependent Variable: LGDP				
LGDP = C(1)*LGDP(-1) + C(2)*LGDP(-2) + C(3)*LK(-1) + C(4)*LK(-2) + C(5) *LL(-1) + C(6)*LL(-2) + C(7)*LCAP(-1) + C(8)*LCAP(-2) + C(9)*LREC(-1) + C(10)*LREC(-2) + C(11)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.706340	0.188064	3.755844	0.0012
C(2)	0.491177	0.208539	2.355322	0.0288
C(3)	0.127678	0.055592	2.296874	0.0496
C(4)	0.069799	0.032581	2.142326	0.0368
C(5)	0.297286	0.346592	0.857740	0.4012
C(6)	0.097475	0.344389	0.283038	0.7801
C(7)	0.319355	0.115658	2.761195	0.0120
C(8)	0.322402	0.146301	2.203688	0.0394
C(9)	0.290843	0.101434	2.859833	0.0141
C(10)	0.294834	0.114202	2.581974	0.0293
C(11)	0.057765	0.151850	-0.380410	0.7077
R-squared	0.984933	Mean dependent var		8.065298
Adjusted R-squared	0.973899	S.D. dependent var		2.086597
S.E. of regression	0.162985	Akaike info criterion		-0.518894
Sum squared resid	0.531283	Schwarz criterion		-0.010059
Log likelihood	19.04285	Hannan-Quinn criter.		-0.353026
F-statistic	489.7028	Durbin-Watson stat		2.008709
Prob(F-statistic)	0.000000			