

Public Expenditure and Economic Growth: Evidence from Nigeria and South Africa

Odo Stephen Idenyi¹, Igberi Christiana Ogonna², Udude Celina
Chinyere³, and Anoke Charity Ifeyinwa⁴

^{1,3,4}(Department of Economics, Ebonyi State University, PMB 053, Abakaliki, Ebonyi State, Nigeria)

²(Department of Economics, Federal University Ndufu- Alike Ikwo, Ebonyi State, Nigeria)

Abstract: This study examined the relationship between public expenditure and economic growth in Nigeria and South Africa. The econometric methodology employed was the co integration and Wald/Pair wise Granger causality test. The presence of long run equilibrium found led to the use of Vector Error Correction Mechanism (VECM). Result indicates as follows: (i) stable long run relationship between public expenditure and economic growth was identified for Nigeria with the co integration test indicating five (5) co integrating vectors and four (4) for South Africa. (ii) public recurrent expenditure has significant negative impact on economic growth in Nigeria, but has insignificant positive impact on economic growth in South Africa. (iii) public capital expenditure in Nigeria and South Africa has significant negative impact on economic growth. (iv) the Wald test for Nigeria indicates causality between public expenditure and economic growth. Keynes theory of public expenditure therefore holds for Nigeria economy. The Wald test also reveals that there is causality between economic growth and public capital expenditure of South Africa. This shows that Keynes theory is applicable to capital expenditure of South Africa. The findings also showed that there is no causality between recurrent public expenditure and economic growth in South Africa. The study therefore makes the following recommendations: (i) Governments of Nigeria and South Africa should adopt consistent fiscal policy measures that can entrench budget discipline, transparency and accountability. (ii) Governments of Nigeria and South Africa should adhere strictly to IMF recommended capital to recurrent budget ratio of 60:40 percent which will ensure that reasonable proportion of the budget is dedicated to capital projects that has the capacity to stimulate economic growth and create employment. (iii) Government of Nigeria and South Africa should see the urgent need to create conducive environment for private sector active participation in economic activities and implement with all sincerity a Public Private Partnership Programme (PPPP). These will ensure increased efficiency in the allocation of resources and tend to reduction in government size.

Keywords: Public expenditure, Economic growth, Nigeria, South Africa

I. INTRODUCTION

Background to the Study

Public expenditure refers to the expenses made by the government for its upkeep and for the maintenance of the society. Public expenditure has been established to have linkages with economic growth and development hence this study is considered relevant for policy. The composition of government spending in developing economies has not been consistent over some decades. It is often agreed that there is need to assess the relative trend in government spending across emerging economies and to evaluate the possible contribution of each sector to economic growth as this will enhance allocative efficiency. For government expenditure to be able to promote growth and development in any economy there is need for the budget process to be critically reappraised to ensure that resources are allocated based on social, human and infrastructural need in the economy.

Every country sets as its priority the growth of the economy and the development of its infrastructures notwithstanding her economic peculiarities, fiscal policy targets and political settings, Chimobi, (2010). Though rate of growth differs, steady growth remains creditable macroeconomic goal of every nation hence each economy adopts separate approaches especially through the budgetary process to administer and evaluate government activities. Ownership of resources and its efficient allocation through the budget cycle plays dominant role in influencing the extent an economy can attain steady growth. Moreover, the ability of an economy to attain steady growth can also be enhanced by the income the country mobilizes from international sources. For example, proceeds from the sale of crude oil globally declined within the period of this study, hence, compelling oil exporting countries to seek other internal revenue sources so as to increase the level of resources available in the economy and consequently raise their capacity to provide social services. Garba and Abdulahi (2013) opines that after many years of colonial rule Nigeria still depend on income from crude oil for most of her development programmes neglecting

other viable sectors like agriculture and mining, which has the capacity to support the alternative to oil revenue programme of the government.

Public spending in Nigeria has consistently been rising and in spite of the huge costs, the budgetary result has remained far off set benchmarks (SPARC 2014). As a result, the country has not made any tremendous progress in infrastructural and social development with three percent GDP growth rate in 1990s and seventy percent prevalence of poverty in 1999 (Soludo, 2007). According to Okeke (2008) both federal and state budgets in Nigeria has become annual rituals with average implementation rate below forty percent (40%) within the period of this study. Over and over again, budgetary outcomes have remained far off budgetary benchmarks when compared with the planned development targets (SPARC, 2014). Odo, Igberi and Anoke (2016) advocates for the re-appraisal of the nation's budgetary process especially a movement from the traditional incremental budget procedure to zero based budgeting, if the government must realize her development agenda as contained in the budget and consequently achieve economic growth.

The World Bank classified South Africa as an upper middle income nation along Croatia, Mexico, Brazil, Malaysia and Argentina in terms of gross national product per capita. The size of South African economy is by far greater than the rest of other South Africa development community and she still remains their major trading partner.

Ansari, Gordon and Akuamoah (2010), suggested in their study of three developing African countries that government expenditure can be used to promote growth in developing economies through the multiplier effect of deficit financing. Odhiambo (2015) in a test of the validity of Wagner's law in South Africa, sees public expenditure as a necessary tool to achieve growth in the economy. He believes that the rise in public spending in South Africa in recent time must not be unconnected to the increasing demand for social services by the black population since the nation's attainment of democracy.

Economic theory suggests that public spending can be used to improve economic growth problem in both Nigerian and South African economy. Both Keynesian and neoclassical economists posit that the valuable tool for government involvement in checking economic growth problem in the economy is public expenditure. Nigerian and South African government through public expenditure outlays always center its intention of realizing fundamental macroeconomic target in the areas of economic growth, full employment, price stability and poverty reduction (Usman, 2011).

The term public expenditure is defined as payments on material goods and encompasses spending on valuable and material properties that can enhance service delivery. International Monetary Fund (2010) states that public expenditure frequently focused on public goods such as provision of health facilities, acquisition of fresh information technology equipments and constructing standardized networks of roads, bridges, flyovers as part of set targets. Also, CBN (2011) states that government expenditure is the money spent on goods that are classified as investment goods. This means expenditure involving durable properties that has capacity to stimulate domestic investment. This consists of infrastructural provisions in health and education sector of the economy, power sector, telecommunication, agriculture, and road construction. The growing unemployment rate in Nigeria and South Africa has been a major concern, in spite of the fact that the government had initiated some programmes aimed at improving national output by a systematic boost in government expenditure.

The pattern of public expenditure in Nigeria has been on regular increase over the years (Aregbeyen and Akpan, 2013). Available data indicate that the pace of poverty in the country has been increasing due to reasons such as: increase in the rate of unemployment, unnecessary embargo placed on fresh recruitment both in the public and private sector of the economy and negligence of capital budget by the government. Hence given the continuous level of economic growth in the countries under study, remedial measures such as improving fiscal measures in government finances and implementing suitable procedures to attract foreign direct investment, among others, are considered crucial towards stemming the surge (Kemi and Dayo, 2014).

In 2014, South Africa's development revolved around two percent growth rate of gross domestic product, the worst from the time of the global meltdown. South Africa suffered unprecedented labour crises since attainment of democratic governance, a development that impacted negatively on economic growth of the economy as this was coupled by decline in her export trade and a reduction in her domestic investment.

Justification/Significance/Need of the Study

The main contribution of this study to knowledge is the understanding that allocative efficiency in public spending is achievable in Nigeria and South Africa and should constitute the target of all public expenditure programme and policy in both countries. More so, that such target will be best realized through the application of Zero Based Budgeting (ZBB) system in preference to the current practice of incremental budgeting. Also in investigating the nexus between public expenditure and economic growth in Nigeria and South Africa, we consciously evaluated various empirical studies in Nigeria, South Africa and other economies both within and outside Africa. We can confidently conclude that despite what has already been done in terms of study, scope,

geographical spread, specification of variables and adoption of econometric methodology, we found issues of wrong choice of appropriate variables and erroneous model specification which this study has addressed.

Worldlistmania.com in ranking of top 20 richest countries in Africa in 2013 placed South Africa and Nigeria 5th and 16th in that order though the two countries are rated the biggest economies in Africa by GDP definition. Both economies are also perceived as struggling for political supremacy in the continent, therefore, a study of both economies is obviously significant. The study is also important for other reasons. To the government, it will provide veritable policy choice in the management of fiscal policies in both countries. To development agencies, it will provide necessary information for intervention in the public sector of Nigeria and South Africa. To researchers, it will provide an updated reference material for further research since it will add to existing literature on the subject in both countries.

Objectives of the Study

The broad objective of this research is to examine the relationship between public expenditure and economic growth in Nigeria and South Africa. The specific objectives include to:

1. Investigate the extent to which stable long run relationship exists between public expenditure and economic growth in Nigeria and South Africa.
2. Determine if public recurrent expenditure has significant impact on economic growth in Nigeria and South Africa.
3. Determine if public capital expenditure has significant impact on economic growth in Nigeria and South Africa.
4. Investigate the degree of significant casual relationship between public expenditure and economic growth in Nigeria and South Africa.

Statement of Problem

In the 1970s, the excess proceeds from the sale of crude oil triggered the indigenization/nationalization policy of the government which involves government intervention to acquire and control on behalf of the Nigerian people the larger part of the productive assets of the country. Prior to the indigenization /nationalization policy in Nigeria, foreigners dominated the ownership and management of such firms. This policy led to the massive acquisition of industries by both private investors and governments of Nigeria thereby leading to phenomena growth in public expenditure in Nigeria. Consequently, in the 1980s, the international energy crises and decline in prices of crude oil, made it difficult for the massively acquired industries to be sustained due to poor revenue accruable to government. This development led to the collapse of many industries and subsequent massive retrenchment of workers, worsening an already increasing unemployment problem in the economy. In order to mitigate this challenge, the government started exploring other revenue sources leading to the contraction of both domestic and external debt burden that has not abated till date in order to sustain her already huge expenditure profile and bring some of these industries back to life.

In South Africa, the end of apartheid and emergence of democratic governance in the 1990s led to increase in the expenditure of government in the bid for the Dr Nelson Mandela led regime to provide accelerated social service delivery for the black population after many years of deprivation and neglect. It is instructive to note, that this drive for social and infrastructural transformation of South Africa is believed to be accountable for the sustained increase in government expenditure in the economy in the recent time. The South Africa leadership has made several efforts to bridge the infrastructural gap especially within the geographical zones dominated by the black population. The rising unemployment rate in the former apartheid economy coupled with constant civil unrest and high crime rate has also increased government expenditure on the area of security and social welfare programmes.

In spite of enormous public expenditure on the agricultural, health, road construction, power, telecommunication and transportation sectors, the pertinent questions herein include: to what extent has government capital expenditure affected level of national output in the two countries under study? And how far has government recurrent expenditure affected national output also in Nigeria and South Africa? Economists are also divided along the ideological lines of Wagner's hypothesis and Keynesian theory and the contention has remained whether government expenditure contribute to growth or hinder economic growth. There is limited combined research on the expenditure and economic growth connection and the outcome of this few empirical research are conflicting, more so the trends of public expenditure and economic growth in Nigeria and South Africa is not consistent with economic theory just as incidence of poverty in the two countries does not reflect the consistent rise in public spending in both countries.

Regardless of these empirical and theoretical postulations and the mounting volume of public expenditure in Nigeria and South Africa and its insignificant development outcome, the determinants of public expenditure in these two countries has not received in depth empirical assessment in the light of these theories. Few studies (e.g. Aregbeyen, 2006; Aruwa, 2010; Babatunde, 2011; Usenobong, 2011, Letile and David 2013) have made attempts

but with diverse conclusions concerning the expanding public expenditure with regard to economic growth in both countries.

The trends of public expenditure and economic growth in Nigeria and South Africa are shown below in tabular and graph forms;

Table1: Trend of GCE/GRE and RGDP in Nigeria

YEAR	RGDPN	GCEN	GREN
1980	315	10.2	4.8
1985	253	55	7.8
1990	328	24	36.2
1995	352	121.1	127.6
2000	412.3	239.5	461.6
2005	561.9	519.5	1223.7
2010	1776.3	880	1310
2014	1876	541.6	923.4

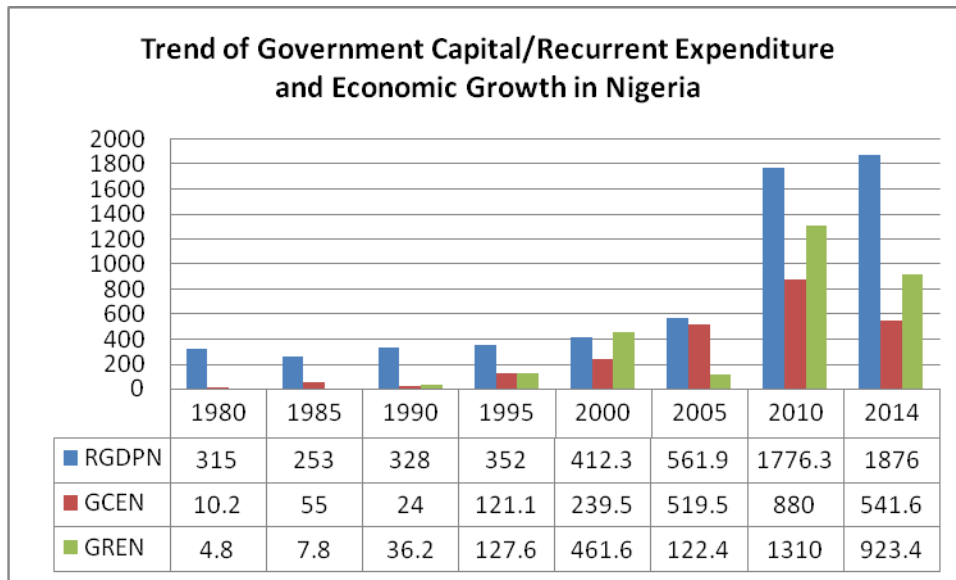


Figure1: Trend of GCE/GRE and RGDP in Nigeria

Table2: Trend of GCE/GRE and RGDP in South Africa

YEAR	RGDPS	GCES	GRES
1980	1405	29.9	89.6
1985	1503	66.8	23.2
1990	1632	165.5	56.9
1995	1703	349.9	102.07
2000	1955	590.5	173.7
2005	2359.5	1023.9	319.3
2010	2748	1621.7	555.9
2014	2712	2322.6	859.7

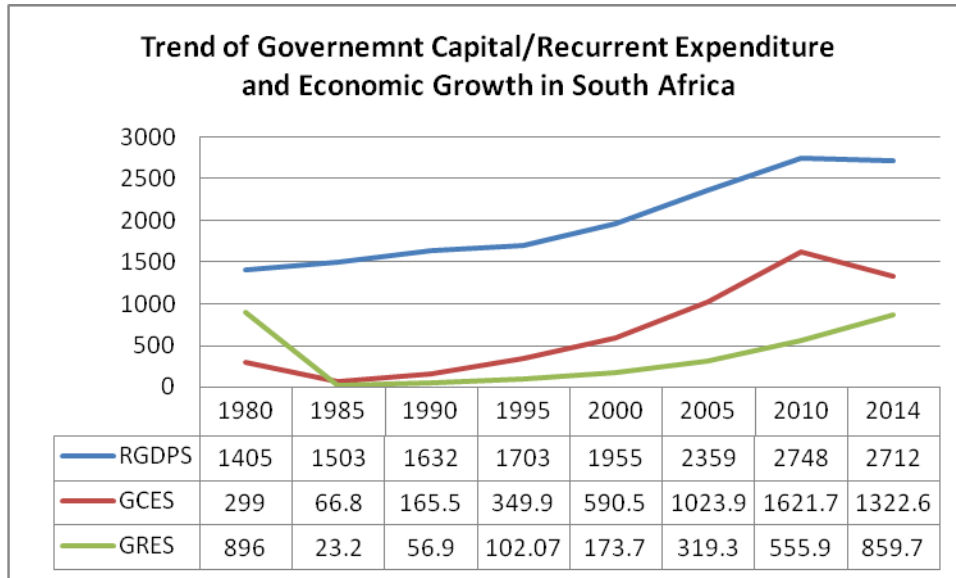


Figure2: Trend of GCE/GRE and RGDP in South Africa

The tables and graphs above indicate the developments between public expenditures and economic growth in Nigeria and South Africa. It is clear from the trend that public expenditure and economic growth in both countries do not follow a consistent pattern as predicted by economic theory, reinforcing the need for this study.

The inability of government expenditure to impact positively on national output and development in the two developing economies under study without doubt, calls for critical investigation. Perhaps, the low level of economic growth in Nigeria and South Africa may be attributed to lack of proper implementation of public expenditures programmes over the years. Maybe, reducing economic growth can have significant negative socio-economic consequences in the two countries.

Nigeria compared with south africa

Table 3: Comparison of Nigeria and South Africa Economy

INDICATORS	NIGERIA	SOUTH AFRICA
GDP	\$510 billion	\$384 billion
Exchange Rate to dollar	171.9	15.50
Unemployment Rate	19.7	25.4
Ease of doing business	169/189	73/189
Inflation Rate	9.3	4.6
Power Generation/mgwt	4000	10000
Corruption Index	26	44
Growth rate of GDP	6%	3%
Population	170 million	52 million
GDP per Capita	\$2800	\$7500
Social Progress Index	123/132	69/132
Population Projection 2050	440 million	65 million
Consumer Price Index	11.5%	5.5%
Foreign Reserves	\$53 million	\$40 million
Debt/GDP	15%	50%
% Reliance on commodity expt.	95%	65%

Source: www.worldbank.data/indicators, 2014

From table 3 above, South Africa's economy is better off than that of Nigeria judging from the few development indicators stated in the table. In terms of overall ease of doing business for instance, Nigeria is rated 169 against South Africa's 73. Others include exchange rate to a dollar, Nigeria is 171.9 while South Africa is 15.50, inflation 9.3 & 4.6, power generation capacity in megawatts 4000 & 10000, corruption perception index 26 & 44, per capita income \$2800 & \$7500 and social progress index 123 & 69 for Nigeria and South Africa respectively. Social progress index is defined by about 54 wellness indicators. However, Nigeria GDP is \$510 billion against South Africa \$384 while unemployment rate is 19.7 in Nigeria against 25.4 in South Africa, the only two areas

Nigeria fares better, though when you compare the GDP against the population it shows poorer per capita income against Nigeria.

Table 4: Trend of Public Expenditure and Economic Growth in Nigeria and South Africa

YEAR	RGDPN	GCEN	GREN	RGDPS	GCES	GRES
1980	315	10.2	4.8	1405	299	896
1985	253	55	7.8	1503	66.8	23.2
1990	328	24	36.2	1632	165.5	56.9
1995	352	121.1	127.6	1703	349.9	102.07
2000	412.3	239.5	461.6	1955	590.5	173.7
2005	561.9	519.5	122.4	2359	1023.9	319.3
2010	1776.3	880	1310	2748	1621.7	555.9
2014	1876	541.6	923.4	2712	1322.6	859.7

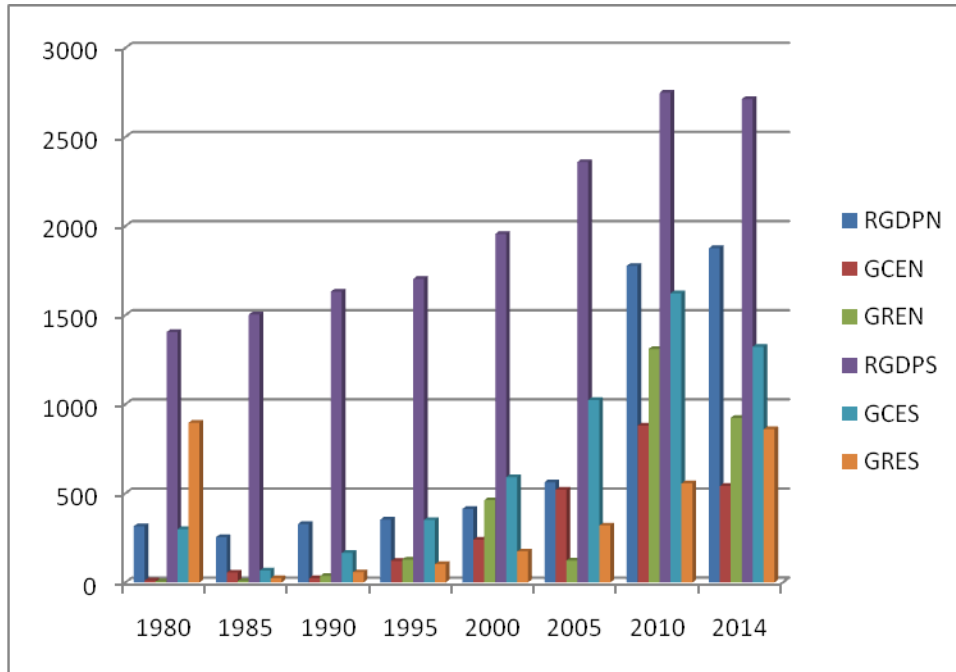


Figure3: Trend of Public Expenditure and Economic Growth in Nigeria and South Africa

Note: This is prior to Nigerian rebased GDP in 2014

Table 4 and figure 3 above relate to developments in public expenditure and economic growth in Nigeria and South Africa. The data confirms that prior to Nigeria’s 2014 GDP rebasing the gross domestic product of Nigeria trailed that of South Africa.

This study investigated the relationship between public expenditure and economic growth in Nigeria and South Africa from 1980-2014. The choice of the time frame is informed by the following considerations: the period is wide enough to enable good deductions to be made that will influence or redirect policy decisions and the relevant data for the study are available.

III. REVIEW OF RELATED LITERATURE

The Concept of Fiscal Policy

Fiscal policy is an indispensable tool for stabilization in the economy. This refers to government actions in respect to its income and disbursement as induced by the government net receipts, surplus or deficit. Fiscal policy entails the use of government expenditure and revenue programme to produce desirable effects on the national income, production and employment. The core target of fiscal policy is long run stabilization of the economy which is usually realized by moderating short run economic fluctuations.

Hence, fiscal policy through changes in the expenditure and taxation programmes of government has obvious effects on national income. An increase in government expenditure during recession increases the total demand for goods and services and leads to a huge increase in income through the multiplier effect while an increase in taxes decreases the disposable income and consequently reduces consumption and investment spending, hence the

government can by manipulating public expenditure and taxation control both inflationary and deflationary trends. Government expenditure financed through deficit budgeting can crowd out private investment in the economy there by having adverse effect on economic growth.

An increase in government expenditure increase total demand, national income and interest rate thereby causing private investment to decline. The argument is based on short and long run effects of expenditure increase on the economy. In fiscal policy management, the application of rules and discretion has remained a major source of controversy. The issue is whether the monetary and fiscal authorities should conduct policies based on a known rule which specifies how policy variables will be determined in prospective economic situations or whether the authorities should apply discretion in determining policy variables as they arise.

Public expenditure is used as a stabilization policy in the economy which implies leaning against the prevailing economic winds. It demands conscious changes in government spending pattern and deficit financing measures during economic booms or recessions as fiscal policy plays dynamic roles in developing economies like Nigeria and South Africa. Precisely, the application of fiscal policy tools especially the use of government expenditure has been useful in addressing various economic problems that has confronted Nigeria in recent times. Since the abolition of apartheid and the entrenchment of democratic institution in South African, fiscal policy has been a major instrument of economic stabilization and growth enhancement.

Concept of Fiscal Illusion

Fiscal illusion is a concept of government expenditure that suggests that when revenue sources are not transparently disclosed, the cost of governance is perceived to be less expensive than it actually is. The benefit that comes from these unknown government revenue sources increases the public desire for more government spending, hence instigating the political class to expand the size of government.

Buchanan and Wagner (1977) suggests that complicated tax system tend to support fiscal illusion and consequently increases the scope of government spending that it would have been if every tax payer understands fully how much they contribute through the tax system to sustain the cost of governance. Some economists also believe that deficit spending with pretentious tax cuts are unrealistic as they believe that there is a significant negative correlation between the level of government expenditure and tax revenues.

Reduction in tax rate and adjustment in tax structure while sustaining deficit financing makes government spending appear cheaper than it actually is. The concept of fiscal illusion presupposes that the actual cost and benefit of government may be misunderstood by the populace depending on how the fiscal policy tools are administered. Some economists believe that the way and manner government revenue are raised influences the perception of tax payers hence direct taxation causes less fiscal illusion than indirect taxes. Since direct taxes imposes more burdens on the tax payers and will cause them to resist further government costs resulting in an increase in taxation. Indirect tax does not impose much burden on the tax payer hence its contribution to government spending is difficult to measure hence government benefits may be applauded without understanding the actual source of funding.

The bedrock of this theory is that the tax system or structure makes the actual cost of governance to be underestimated with tax payers not truly informed of the actual cost of taxation and its relative contribution in government total expenditure. It is necessary to note that the extent of the operation of fiscal illusion in Nigeria and South African can only be determined empirically. This is true especially in Nigeria where the impact of the proceeds from crude oil is seen as the determinant of government spending and not really based on proceeds from taxes.

Keynes Theory of Public Expenditure

The study's overview of the public expenditure theory of John Maynard Keynes will be anchored on its applicability to the underdeveloped economies, taking Nigeria and South Africa as a point of reference. It is the opinion of this study that the Keynesian theory is not applicable to every socio economic set up rather to advanced democratic capitalist economies. It is the opinion of some economists that practical Keynesianism is a seed which is difficult to be transplanted in a different soil without either destroying it or making it poisonous to the receiving economy, even though in the English soil it thrives with both fruit and shade.

The Keynesian hypothesis is based on the presence of cyclical unemployment which occurs during a depression. It is as a result of ineffective demand in an economy; hence any increase in demand will help to reduce unemployment through deficit financing. Deficit financing involves a deliberate attempt to make budgetary provisions in excess of available resources leading to borrowing in order to fund the deficit budget. The additional resources borrowed will consequently increase government expenditure. It is necessary to note that the Keynesian economic prescription seems to apply to the kind of unemployment in advanced economies. The nature of unemployment in developing countries like Nigeria and South Africa is chronic rather than cyclical hence some economist express doubts on the capacity of the Keynesian public expenditure theory to effectively impact growth in developing countries. It is also necessary to note that apart from chronic unemployment, developing economies also

suffer from disguised unemployment. It is suggested that the economic problem of the developing economies contrary to Keynes position is not due to lack of effective demand but shortage of capital resources.

John Maynard Keynes obviously devoted his analysis on the short run in which the existing skill and quantity of available labour, the current number and value of equipment, the prevailing technique, the extent of competition, the tasks and attitudes of the consumer, the disutility of different intensities of labour and the organization as well as social structures were taken as given while on the contrary all the basic factors assumed by Keynes as given change over time casting doubt on the applicability of these assumptions and its relevance to contemporary fiscal policy management in developing countries like Nigeria and south Africa. This study believes that Keynesian proposition is based on the concept of a closed economy. The economies of developing nations are not closed economies as Nigeria for instance exports crude oil, agricultural products and also import all manner of manufactured goods from Asian, American and EU countries. South Africa on the other hand also export gold and import all sorts of materials from other countries of the world. In this regard, one wonders the possible relevance of the Keynesian hypothesis. Keynes theory of public expenditure presumes that human labour and other complementary resources are in excess supply in the economy. This implies a depressed economy where the industries, machines, managers and workers including consumers' attitude are available only waiting to resume their temporarily suspended functions and roles. This does not match the economic situation in developing countries which is not characterized by suspension of economic activity nor is static. Capital, skills, factor supplies and economic infrastructure are seriously in short supply or none existent. Nigeria and South Africa for instance are not depressed economies, rather developing nations with shortage of physical and human capital and infrastructure accompanied by an inefficient institutional framework that promotes corruption and deficient service delivery system. Hence, it can be deduced from the foregoing discussion that labour and capital are simultaneously unemployed in developing nations i.e. when labour is not engaged, capital and equipment are also not fully utilized or there is excess capacity in them. But in Nigeria and South Africa as developing countries, there are acute shortages of capital and equipment and attempt to bridge this infrastructural gap through public expenditure programme has not yielded positive results. It is the opinion of this study that Keynes policy initiatives are difficult to apply under the prevailing conditions in the developing nations. This is because; an attempt to increase investment spending induces rise in prices rather than increase in economic growth. We are also of the opinion that government spending in developing countries like Nigeria and South Africa if directed to funding capital formation does not lead to inflation since it is used for increasing the capacity of the economy to produce more goods and services.

Theory of Allocative Efficiency in Public Expenditure

The Keynesian theory of public expenditure pre supposes that public expenditure as a fiscal policy is an instrument to generate demand for goods and services in the economy during deficit financing. This is made possible through the budget process which involves the sharing of the government resources into sectors of the economy based exclusively on the subjective opinion of the government in power who allocates the resources to preferred sectors and withholds it from other sectors not based on any established rules or scientific methodology. The success of every administration and her ability to effectively provide social and infrastructural services for the populace depends on this unscientific discretionary resource allocation style. A major role of contemporary public expenditure management is to develop institutional settings that can guarantee allocative efficiency in public spending. In specific terms, allocative efficiency means the ability of public expenditure authorities to share government resources on the grounds of objective public programs in attaining set development goals. This involves the ability to move state resources from sectors not considered important to choice sectors of the economy, setting her priorities and goals very clearly and mobilizing resources to ensure such goals are met. To be seen to have allocated efficiently, the public expenditure management authorities must be calculative and instructive, looking ahead to define the actual result that is intended to be achieved and subsequently coming back to reexamine the outcome to ensure the set goals has either been achieved or not. Here a link must be established between strategic planning and evaluation in public expenditure management and budget procedures. It is instructive to note that allocative efficiency cannot be attained under the current incremental budgeting system in Nigeria and South Africa. Incremental budgeting matched the times but it is an unacceptable way of allocating resources. It promotes wastefulness and has the propensity to bloat the volume of the public sector. Incremental budget does not support fiscal discipline by supposing that spending will grow per annum and thereby increasing the totals as such budgeting principle calls to question due process assumption in public finance. Consequently, recent developments in the field of public finance tend to favour planning-programming-budgeting systems (PPBS) and Zero based budgeting (ZBB) instead of incremental budgeting. PPBS give budgeting a longer time period to grow its investigative competence while zero based budgeting seeks to redistribute resources within the context of initial programs and expenditure. Although the duo are procedurally different, both PPBS and ZBB seek to intensify competition for budget resources

while PPBS provides information on the cost effectiveness of alternative means of realizing government goals, ZBB strives to have every spending unit prepare alternative budgets each with incremental resources and output. It is the opinion of this study that if the objective of public expenditure programmes is to be realized in the developing economies (Nigeria and South Africa in this instance), and allocative efficiency attained with increase in economic growth, then Zero based budgeting must be embraced as against the practice of incremental budgeting.

Rostow's Stages of Economic Growth

Professor W.W. Rostow approached economic development from a historical angle. He identified the traditional society, the pre conditions for take – off, the take – off, the drive to maturity and the age of high mass consumption. It is suggested from this theory that level of public expenditure in any economy should reflect any of these stages. For instance, the expenditure pattern of an economy in the traditional stage cannot be the same with another economy at the drive to maturity stage or the age of high mass consumption.

The Traditional Stage

Jingan (1997) explained a traditional society as one whose structure is within constrained production capacity based on pre Newtonian science and technology as the social structure of the traditional society was based on social order where the relationship in the clan plays a major role. At this stage, there was a concentration of political power in the regions in the hands of owners of properties supported by military strength and technocrats. A greater number of the populations were engaged in agriculture. Obviously, agriculture is the main stay of such economy and contributes significantly to the resources of the traditional society. These resources are usually committed to non economic projects and programmes like temple buildings and monuments, funeral ceremonies, marriage ceremonies and paying for war expenses.

The Pre Condition for Take-Off

This is the second stage identified by Rostow as a situation where the pre conditions for steady growth in the economy are created. Rostow suggests that the pre condition for take – off from traditional society flows from certain lines. The first is the understanding that economic progress is achievable and is a pre condition for over all economic development. This understanding triggers new sets of economic agents and enterprising investors both in the public and private sector of the economy interested in mobilizing savings in the economy. This new orientation for growth and development also stimulate activities in the financial sector encouraging the establishment of financial institutions and capital markets as necessary condition for the ultimate take – off. Rostow posits that this pre condition for steady industrial growth comes with sudden changes in three non industrial sectors. There will in the first place be a growth in social overhead capital aimed at increasing market activities and to enlarge the productive base of the economy to enable the political class has an effective grip of the economy. Secondly, the new idea should trigger a technological revolution in agriculture that can make agricultural productivity to increase in order to meet the growing need of the new urban population. Finally, growth of imports especially importation of capital goods funded by the new developments in the productive sector and market enterprise including the rise in exportable materials in the economy. The basis of the transition to take off is anchored on the increase in the rate of investment to a level that is greater than the population growth rate.

The Take Off

This stage is presumed the starting point in reaching the desired destination and economic growth becomes a normal condition and powers of modern transformation conflicts with institutions and habits. This stage marks the realization of the expectations of the traditional stage and general interest in development gets built into the interest of the society. According to Rostow, the take off stage is synonymous with an industrial revolution associated with the radical changes in production method. Rostow believes this stage is supposed to be short, ranging from one to two decades. Rostow identified three conditions for takeoff;

- A change in the rate of productive investment from about 5% to 10%
- A substantial growth in industrial development coupled with high rate of economic growth.
- An emergence of a social political and institutional frame work that will take advantage of the new order to stimulate growth.

1. The Drive to Maturity

The drive to maturity stage follows the take off stage and represents a time period when a society has adopted modern technology across her resources. This time represents a period of sustained economic growth spanning across four decades. This entails the replacement of old technique of production with new ones and creation of new sectors in the economy with rate of investment growing above 10% of national output. Rostow believes that at this stage of technological maturity, the following changes can take place. There will be a change from unskilled to skilled manpower growth in the economy with majority of the populace preferring to live in the urban centres. There will be growth in real wages and the development of trade union to carter for the needs of the labour force. This stage also promotes a change in the disposition

of entrepreneurs replacing rugged and hard working masters to polished and efficient administrators. The society feels bored by the trends in technological advancement leading to the yearning for new order.

2. The Age of High Mass Consumption

This stage is usually noted for extensive growth in the urban population, mass use of automobile and durable consumer goods and household gadgets. At this stage, emphasis is shifted from supply to demand, from issues associated to production challenges to matters of consumption and welfare. The increases in welfare are encouraged by the conscious promotion of national policy to promote power and control beyond national boundaries. Progressive taxation is encouraged in order to protect and promote the welfare of the working class coupled with the desire to create additional commercial centres. As earlier suggested, the contemplation of this study is that growth in public expenditure should reflect at each stage a commensurate commitment from government as the challenge in the provision of social and infrastructural sciences will differ correspondingly.

Empirical Review

The determinants of government expenditure in South Africa from 1960 to 2007 were the subject of investigation by Alm and Embaye (2010) using co integration and error correction econometric tool of analysis to examine the variables incorporated in the model. The co integration result indicates a long run equilibrium relationship among the variables in the model, indicating that the results can be relied upon in taking long run policy decisions in the economy. The findings also indicate that per capita government expenditure was affected positively by external shocks. The authors contended that fiscal illusion plays a role in expanding government spending, advocating transparency and accountability in tax administration, so that the average tax payer should have sufficient information when evaluating the contributions of her taxes in government overall spending, especially when it has to do with any form of indirect tax.

Alimi Santos (2014) investigated the causality between public expenditure and national income using panel data methodology for Nigeria, Ghana and South Africa from 1970 to 2012. The study adopted Johansen Fisher Panel Co integration Test jointly and on individual basis adopted time series Johansen-Juselius co integration techniques. The study obtained the following results. The panel co integration results indicate a long run relationship between government spending and national income in the whole panel indicating that the result can be relied upon in taking long run decision in the economy. The Johansen-Juselius co integration test indicate the presence of long run relationship between government spending and national income only for Ghana in line with Wagner's theory indicating that public expenditure has no impact on economic growth in the long run in Nigeria and South Africa. The study found evidence of bi-directional causality for the whole panel. Additionally, the result from the causality test shows that there is a bi-directional causality that runs from national income to government expenditure and vice versa for Nigeria and South Africa. However, for Ghana, there was a unidirectional causality that runs from government expenditure to national income and there is no feed-back mechanism. The study concluded that Government spending enhances national income in the short run for Nigeria and South Africa. The implication of the result of the analysis is that for Nigeria and South Africa, government expenditure increases proportionately with increase in national output, while in Ghana government expenditure triggers the growth in national output.

Letile and David (2013) empirically examined the correlation between government spending and national productivity in South Africa for a period spanning 1980 to 2011 using statistics from South Africa Reserve Bank. Ordinary least square, co integration, error correction model and granger causality econometric methodology was adopted to examine the time series data in the model as specified. The pair wise granger causality model was applied to investigate whether causality exists among the identified variables purposely to establish the applicability or otherwise of Wager's law in the economy. The outcome of the estimation indicates a significant impact of government spending on national productivity, and causality running from gross capital formation granger national output. The policy implication of the result is that, government should increase her expenditure especially in the area of capital investment, seeing from the causality test that national development in South Africa is triggered by domestic capital formation. The finding also indicates that Keynes theory is supported in the economy, hence the study recommends deficit financing so as to boost government spending and by implication national output.

Menyah and Yemane (2012) reassessed the applicability of Wagner's hypothesis in the economy of South Africa spanning across 1950-2007 making use of co integration and granger causality econometric tools of analysis. The result of the econometrics estimation by the authors shows causality running from national output to government spending, hence validating Wagner's proposition that as national output increases, there is tendency for government spending to increase proportionately. The implication of this result is that fiscal policy management has to be directed towards stimulating national productivity which will lead to increase in per capita income, increase in demand and consequently job creation.

Jibir and Babayo (2015) examined the impact of government expenditure on national output in Nigeria based on statistical data generated between 1970 and 2012. Secondary data were gotten from the CBN, NBS, Journals, text books etc. The study reports that the model was fitted with three variables: real GDP, capital and recurrent expenditure. The econometric tools of analysis were the ADF unit root test and ordinary least square multiple regression followed by pair wise Granger causality test. The study objective is to investigate the overall effect of government expenditure on national output and also consider whether government expenditure granger causes national output. The result showed that all the variables in the model were stationary at level. Other findings showed positive and insignificant relationship between capital spending and national output while recurrent spending had a significant positive impact on national output. Granger causality test showed a unidirectional causality moving from the fiscal variables to national output in support of Keynes theory. The study recommended more allocation of resources for recurrent purposes and that government should establish the body that will monitor due process implementation in public service, so as to avoid over invoicing and stealing of public funds. The implication of the result of this estimation is that recurrent spending causes growth in the economy, possibly through the contribution of well developed human capital. More so, the result validated the applicability of Keynes theory in the economy implying that public expenditure triggers growth as postulated by Keynes.

Emmanuel Zirimba conducted an econometric test for South Africa in 2008 using time series data from 1960 to 2006 to estimate the variables incorporated in the model adopting co integration, autoregressive distributed lag model and granger causality econometric tools of analysis for the study. The principal goal of the research was to examine Wagner's law by estimating the causal relationships between real government expenditure and real income for South Africa. After performing the unit root test on the variables to ensure they are fit for estimation, the co integration result indicate a long run relationship between the dependent and explanatory variables in the model, showing the result can be relied upon in taking long run policy decisions in the economy. The author contends that a necessary condition for establishing the applicability of Wagner's hypothesis in any economy is that a long run relationship exists between national income and government expenditure but the sufficient condition is that unidirectional causality runs from income to government expenditure. The study failed to establish a long-run relationship between real "per capita" government expenditure and real "per capita" income. Findings from the short-run causality show two ways causality. Based on the above results, the study concluded that Wagner's theory is not supported in South Africa economy within the period under review

Odhambo Nicholas in 2015 investigated the active causal correlation linking government spending and national output, using time series data from South Africa, the most advanced economy in Africa. The author adopted ARDL-bounds testing approach to examine the variables integrated in the model. Unemployment was integrated into the estimation as an alternating variable between national output and government expenditure, thereby creating a simple multivariate model. The findings of the research show that, both government expenditure and economic growth Granger-cause each other in the short run, the long run causality was unidirectional moving from economic growth to government expenditure in validation of Wagner's law in the economy. The policy implication of this result is that fiscal policy tools should be applied to stimulate growth in national output, including finding support for other means of growing national productivity, like increase in internal sources of revenue.

The possible impact of government spending on higher institutions on national output in Nigeria was the subject of investigation by Japheth, Moses and Cyprian (2014) applying time series statistics from 1990-2011. Co integration and error correction model econometric tool of analysis were adopted for the estimation. The authors were of the opinion that government spending on higher institutions has positive impact on national output in Nigeria. They recommended that public and private sectors should partner by mobilizing resources to furnish tertiary institutions and equip them with adequate facilities in order to enhance tertiary education development for steady economic growth.

IV. THEORETICAL FRAMEWORK

This study is anchored on the Solow – Swan exogenous neoclassical growth model of 1956 which assumes diminishing returns to capital. The exogenous character of the model is explained by the long run growth rate determined by technological advancement. Solow – Swan basic model is expressed in a functional form as;

$$Y = f(K, AL) \dots\dots\dots 1$$

The theory presents the output per effective worker as;

$$y = Y/AL \dots\dots\dots 2$$

and capital per effective worker as;

$$k = K/AL \dots\dots\dots 3$$

where Y is output, K is capital, L is labour, A is level of technology, y is output per effective worker and y is capital per effective worker.

Where Δ is the differencing operator, such that $\Delta y_{t-1} = y_t - y_{t-1}$, δ_{t-1} are the error correction terms
 Introducing the variables in consideration in the model, we have,

$$\Delta RGDP_t = \delta + \rho y_{t-1} + \sum \Phi_i^* \Delta RGDP_{t-1} + \sum \Phi_i^* \Delta GCE_{t-1} + \sum \Phi_i^* \Delta GRE_{t-1} + \sum \Phi_i^* \Delta BOT_{t-1} + \sum \Phi_i^* \Delta GCF_{t-1} + \sum \Phi_i^* \Delta EXR_{t-1} + \xi_t$$
-----22

V. PRESENTATION OF RESULTS

Brief Descriptive Analysis of the Trend of Public Expenditure in South Africa and Nigeria'

It is evident, that theoretical postulations sometimes conflict with economic realities in both countries. Taking the case of the Wagner's law; there are instances where the value of public expenditure increased but accompanied by a negative economic growth. For instance, from 1966 to 1968, the Nigerian economy growth rate fluctuated between -4.25% and -1.25%, while public expenditure growth rate increased from 1.12% to 58.96%. Equally, during the Structural Adjustment Programme (SAP) of 1986, the Nigerian economy witnessed a reduction in growth rate of 2.51% (1986) and 0.9% (1994), while the public expenditure growth rate increased from 35.72% to 54.62 % (Efobi and Osabuohien, 2012)

In South Africa, from 1990 to 1992, growth rate of GDP were, -03%, -0.1% and -2.1% respectively, while public expenditure growth rate were 6.9percent, 2.4 percent and 2.8 percent for the same period (World Development Indicator, 2014). These evidences imply that the behaviour of public expenditure at times follow a conflicting trend with national output.

Expanding public costs has not resulted to consequential progress in both countries. According to the Global Finance Magazine 2013 ranking of the poorest countries of the world based on gross domestic product, at purchasing power parity per capita 2009-2013 , Nigeria and South Africa came 45 and 105 in that order among 184 countries ranked by the Magazine. Gross Domestic Product (GDP) Purchasing Power Parity (PPP) compares common differences in living standards on the whole between nations because Purchasing Power Parity (PPP) takes into consideration the associated cost of living and the inflation rates of countries, rather than using just exchange rates, which may alter the real differences in income). Also, Worldlistmania.com in ranking of top 20 richest countries in Africa in 2013 placed South Africa and Nigeria 5th and 16th correspondingly even though the two countries is rated the two biggest economies in Africa.

In South Africa, the effect of the global economic meltdown was more pronounced among the poor who live below the food poverty baseline as this number increased significantly between 2006 and 2008 before declining in 2011 to 20 percent from previous higher rates resulting in a general reduction in poverty rate. These soaring levels of inequality amid the peak globally are merely to a few extents lesser than the Gini's recorded in 2006. The split of state expenses involving the affluence and poorest continues obstinately latent. The affluent 20 percent of the populace explains over 61percent of utilization in 2011 (declining from a lofty 64 percent in 2006). Meanwhile, the base 20 percent have their split dwindling from 4.4percent in 2006 to 4.3 percent in 2011(Statistics South Africa, 2014).

Unit Root Test Results

The study began with the test of unit root to determine the stationarity of all the employed variables using Augmented Dickey Fuller (ADF) and Philip Perron unit root test. The tests were conducted to avoid spurious regression and are presented in tables 5 to 8 below for both countries.

Table5: Augmented Dickey – Fuller Unit Root Test Result for Nigeria

Variables	Level	5% Crit.val.	Prob.	1 st diff	5% crit.val	Prob.
GCEN	-3.102612	-3.548490	0.1219	-5.727266	-3.552973	0.0002
EXRN	-2.165825	-3.548490	0.4925	-5.498608	-3.552973	0.0004
GCFN	-1.883497	-3.548490	0.6410	-6.682133	-3.552973	0.0000
GREN	-3.167355	-3.548490	0.1079	-6.630302	-3.552973	0.0000
RGDPN	-1.645975	-3.548490	0.7529	-9.340054	-3.552973	0.0000
BOTN	-3.064228	-3.552973	0.1488	-12.42141	-3.557759	0.0000

Sources: Author's computation, 2016 using E view 7.0

Table 6: Philip Perron Unit Root Test Result for Nigeria

Variables	Level	5% Crit.val.	Prob.	1 st diff	5% crit.val	Prob.
GCEN	-3.209587	-3.548490	0.0995	-5.939262	-3.552973	0.0001
EXRN	-2.256526	-3.557759	0.4442	-5.321644	-3.562882	0.0008
GCFN	-1.574915	-3.548490	0.7819	-6.587210	-3.552973	0.0000
GREN	-3.025044	-3.548490	0.1405	-12.59650	-3.552973	0.0000

RGDPN	-1.827390	-3.548490	0.6692	-9.314566	-3.552973	0.0000
BOTN	-3.395823	-3.552973	0.0692	-29.52964	-3.557759	0.0000

Sources: Author's computation, 2016 using E view 7.0

Table 5 above represents the results of ADF unit root test for Nigeria. From the table, at level -3.102612, -2.165825, -1.883497, -3.167355, -1.645975 and -3.064228 for GCEN, EXRN, GCFN, GREN, RGDPN and BOTN respectively were much less than the 5 percent critical values of -3.552973 and -3.557759. The unit root result using Philip Perron is also shown in table 6 above. The study concludes that all the variables have unit root or non – stationary at level in both the ADF and Philip Perron result.

At first difference, since the variables of GCEN, EXRN, GCFN, GREN, RGDPN and BOTN with value -5.727266, -5.498608, -6.682133, -6.630302, -9.340054 and -12.42141 respectively were much more in negative than their respectively critical values at 5 percent level (-3.552973 and -3.557759), the study concludes that all the variables were stationary at first difference. This indicates that all the variables were non – stationary at level but turned to be stationary after first difference in both ADF and Philip Perron.

The results of ADF and Philip Perron unit root test for South Africa is presented below.

Table7: Augmented Dickey – Fuller Unit Root Test Result for South Africa.

Variables	Level	5% Crit.val.	Prob.	1 st diff	5% crit.val	Prob.
GCES	-2.805437	-3.548490	1.0000	-3.690514	-3.552973	0.0372
EXRS	-2.165825	-3.548490	0.4925	-5.498608	-3.552973	0.0004
GCFS	-1.883497	-3.548490	0.6410	-6.682133	-3.552973	0.0000
GRES	-3.089999	-3.548490	0.1247	-7.302080	-3.552973	0.0000
RGDPS	-1.111844	-3.548490	0.9121	-4.295136	-3.552973	0.0092
BOTS	-1.605028	-3.207094	0.7699	-4.771353	-3.552973	0.0028

Sources: Author's computation, 2016 using E view 7.0

Table 8: Philip Perron Unit Root Test Result for South Africa

Variables	Level	5% Crit.val.	Prob.	1 st diff	5% crit.val	Prob.
GCES	-3.359443	-3.552973	0.0745	-7.887032	-3.548490	1.0000
EXRS	-2.397878	-3.548490	0.3740	-6.533608	-3.552973	0.0000
GCFS	-1.733651	-3.548490	0.7140	-5.915496	-3.552973	0.0001
GRES	-3.401674	-3.548490	0.0679	-7.365503	-3.552973	0.0000
RGDPS	-1.677405	-3.548490	0.7393	-5.125823	-3.552973	0.0031
BOTS	-1.655142	-3.548490	0.7490	-4.832410	-3.552973	0.0024

Sources: Author's computation, 2016 using E view 7.0

From the table above, the null hypothesis of unit root is accepted if the calculated T statistics is much less than the critical value at 5 percent level of significance. In South Africa, since these ADF variables in table 7 are much less than their respective values, that is, RGDP (-1.111844 < -3.552973), GCES (-2.805437 < -3.332973), GRES (-3.089999 < -3.552973), GCFS (-1.734724 < -3.552973), EXRS (-2.478241 < -3.552973) and BOTS (-1.605028 < -3.552973), the study accept the null hypotheses and conclude that all the variables have unit root or non – stationary at level. This is also applicable to the Philip Perron test. At first difference the variables RGDPS, GCES, GRES, GCFS, EXRS and BOTS were stationary. This is because the calculated T statistics of -4.295138, -3.690514, -7.302080, -5.890242, -4.663571 and -4.771353 were much more in negative than their critical values of -3.552973. This agrees with the result of Philip Perron. This means that in South Africa and Nigeria, all the variables were integrated to order one, I(1) in both the ADF and Philip Perron estimation.

Co Integration Test Result.

Having established the presence of unit root in both Nigeria and South Africa, the study proceeds to determine the evidence of co integration in both countries. The results of the test were presented in table 9 and 10 below. The table 9 shows the Johansen co integration test results for Nigeria while table 10 represents Co integration results for South Africa.

Table9: Unrestricted Co integration Rank (Trace) Test for Nigeria

Hypothesized No. of CE(s)	Eigenvalue	Trace statistics	0.05 crit.val	Prob.*
None*	0.921531	202.2103	95.75366	0.0000
At most 1*	0.732325	120.7688	69.81889	0.0000
At most 2*	0.625368	78.59339	47.85613	0.0000
At most 3*	0.551533	47.17547	29.79707	0.0002
At most 4*	0.464016	21.51399	15.49471	0.0055

Trace test indicates 5 co integrating equations at the 0.05 level, * denotes rejection of the hypothesis at the 0.05 level, ** Mackinnon – Haug – Michel (1999) P – value.

From the table 9 above, since the trace statistics of 202.2103,120.7688,78.59339,47.17547 and 21,51399 are greater than their 0.05 percent critical value of 95.75366, 69.81889, 47.85613, 29.79709,15.49471 with their corresponding p – values of which are less than 0.05, the study rejects the null hypothesis and conclude that there is evidence of five Co integrating equations in Nigeria.

Table10: Unrestricted Co integration Rank (Trace) Test for South Africa

Hypothesized No. of CE(s)	Eigenvalue	Trace statistics	0.05 crit.val	Prob.*
None*	0.799175	125.5904	95.75366	0.0001
At most 1*	0.514750	72.61487	69.81889	0.0294
At most 2*	0.457404	48.75285	47.85613	0.0411
At most 5*	0.159878	5.748871	3.841466	0.0165

Trace test indicates 4 co integrating equations at the 0.05 level, * denotes rejection of the hypothesis at the 0.05 level, ** Mackinnon – Haug – Michel (1999) P – value.

In South Africa, since the trace statistics of 125.5904, 72.61487, 48.75285 and 5.748871 are greater than 5 percent critical value of 95.75366, 69.81889, 47.85613 and 3.841466 respectively, the study rejects the null hypothesis of no co integration and conclude that co integration exist between government expenditure and economic growth of South Africa. This result is supported by the p – values of 0.0001, 0.0294, 0.0411 and 0.0165 which are less than 0.05. The result of the test indicated the presence of four (4) Co integrating equations.

The co integrating results shows evidence of five (5) co integrating equation for Nigeria and evidence of four (4) co integrating equation for South Africa.

The existence of co integration among the variables as indicated above presents an evidence of long-run economic relationship among the variables. This implies that, vector error correction model is the best option for further analysis. It captures both the long run equilibrium and short run dynamic relationships associated with the above results. .

VECM Results

The analysis employed vector error correction model (VECM) techniques since the variables were non – stationary at level and were co integrated. In order to get a better analysis, two VECM models are used, one for Nigeria and the other for South Africa.

Table 11: VECM Result – Nigeria

Error correction:	Coefficient	Std. Error	T - statistics	P – values
ECT = C(1)	-0.202109	0.000339	-6.222757	0.0000
D(RGDPN(-1)) = C(2)	0.575671	0.185643	3.100956	0.0062
D(GCEN(-1)) = C(4)	-0.035152	0.012901	-2.724675	0.0139
D(GREN(-1)) = C(6)	-0.030629	0.009784	-3.130646	0.0058
D(BOTN(-1)) = C(8)	7.13E-06	1.04E-06	6.829474	0.0000
D(GCFN(-1)) = C(10)	-0.004001	0.001940	-2.062192	0.0539
D(EXRN(-1)) = C(12)	0.286879	0.173120	1.657108	0.1148
C = C (14)	4.638485	4.750058	0.976511	0.3418

$R^2 = 0.873959$, F – statistics = 9.600802, Prob (F – statistics) = 0.000013, DW = 2.092488

The ECT has the expected negative sign with the coefficient of -0.202109, this implies that public expenditure add 20.21 percent per year to economic growth for equilibrium to be restored in the long run. This result is supported by the ECT p value of 0.0000 indicating that it is statistically significant. The R- square is 0.873959 showing that 87.39 percent variation in the dependent variable is explained by the independent variables while the remaining 12.61 percent is explained by other variables not captured by the model which is represented by error term (et).

The F – statistics of 9.600802 with p value of 0.00013 which is less than 0.05 shows that the influence of explanatory variables on the dependent variable is statistically significant. This entails that all the independent variables jointly impact on economic growth in Nigeria as explained by 0.873959 coefficient of multiple determination. The DW has the value of 2.092488 which indicates the absence of auto correlation among the residuals.

Table 12: VECM Result – South Africa

Error correction:	Coefficient	Std. Error	T - statistics	P – values
-------------------	-------------	------------	----------------	------------

ECT = C(1)	-0.466985	0.110661	-4.219947	0.0005
D(RGDPS(-1)) = C(2)	-0.610341	0.377983	-1.614733	0.1238
D(GCES(-1)) = C(5)	-1.46E-09	5.37E-10	-2.709924	0.0143
D(GRES(-1)) = C(6)	0.114564	0.057926	1.977789	0.0635
D(BOTS(-1)) = C(8)	-0.003364	0.000935	-3.597316	0.0021
D(GCFS(-1)) = C(10)	0.005719	0.004481	1.276362	0.2181
D(EXRS(-1)) = C(12)	76.62484	24.53048	3.123658	0.0059
C = C (14)	157.1443	34.88532	4.504597	0.0003

$R^2 = 0.692579$, F – statistics = 3.119354, Prob (F – statistics) = 0.013496, DW = 1.970466

The error correction term which measures the speed of adjustment has a negative coefficient of -0.466985 with the p value of 0.0005 which is less than 0.05. This indicates that the ECT is significant. This entails that public expenditure contributes 46.69 percent to economic growth of South Africa per annum for equilibrium to be restored in the long run. The R – square which is the coefficient of determination has the value of 0.692579 indicating that 69.26 percent variation in the dependent variable is explained by the independent variables while the remaining 30.74 percent is explained by other variables not captured in the model but represented by the error term (et). The F – test determines the overall or joint influence of independent variables on the dependent variable. F statistics of 3.119354 with the p value of 0.013496 which is less than 0.05 indicated that all the independent variables have joint impact on economic growth of South Africa. The Durbin Watson test determines the presence or level of autocorrelation among the residuals, since the DW is 1.970466; it reveals that there is no auto correction among the residuals.

Wald Test Results

To test the hypothesis that the coefficients of one and two years period lag of GCEN and GREN [i.e. D(GCEN(-1)) and D(GCEN(-2)) & D(GREN(-1)) and D(GREN(- 2))] are equal to zero (0), we performed a Wald test.

Table 13: Wald Test - Nigeria

Wald Test:

Equation: Untitled

Test Statistic	Value	Df	Probability
F-statistic	3.747376	(2, 18)	0.0436
Chi-square	7.494753	2	0.0236

Null Hypothesis: C(4)=C(5)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(4)	-0.035152	0.012901
C(5)	0.008471	0.033782

Restrictions are linear in coefficients.

Wald Test:

Equation: Untitled

Test Statistic	Value	Df	Probability
F-statistic	5.734171	(2, 18)	0.0118
Chi-square	11.46834	2	0.0032

Null Hypothesis: C(6)=C(7)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
------------------------------	-------	-----------

C(6)	-0.030629	0.009784
C(7)	-0.019371	0.007825

Restrictions are linear in coefficients.

Recall that $C(4) = D(GCEN(-1))$, $C(5) = D(GCEN(-2))$, $C(6) = D(GREN(-1))$, and $C(7) = D(GREN(-2))$
 Observe that F-test has a p-value of 0.0436 and 0.0118 is less than any alpha (0.05) level of significance. We can reject the null hypothesis, implying that $C(4)=C(5)=C(6)=C(7)$ i- O. Meaning that combining influence of one and two years period lag of GCEN and GREN [i.e. $D(GCEN(-1))$ and $D(GCEN(-2))$ & $D(GREN(-1))$ and $D(GREN(-2))$] in the short run, significantly affect RGDPN.

Table 14: Pair wise Granger Causality Test – Nigeria

Pairwise Granger Causality Tests

Date: 02/01/16 Time: 06:39

Sample: 1 35

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GCEN does not Granger Cause RGDPN	33	4.28109	0.0239
RGDPN does not Granger Cause GCEN		0.93738	0.4036
GREN does not Granger Cause RGDPN	33	9.04812	0.0009
RGDPN does not Granger Cause GREN		0.67821	0.5157

Table 13 & 14 above reveals a unidirectional causality running from public expenditure to economic growth in Nigeria. This is due to significance of their p values which are less than 0.05. This implies that there is unidirectional causality running from public capital and recurrent expenditure to economic growth of Nigeria (RGDPN) as shown in both the Wald test and pair wise granger causality.

Table 15: Wald Tests for South Africa

Wald Test:

Equation: Untitled

Test Statistic	Value	Df	Probability
F-statistic	4.947762	(2, 18)	0.0194
Chi-square	9.895523	2	0.0071

Null Hypothesis: $C(4)=C(5)=0$

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(4)	-1.81E-09	9.53E-10
C(5)	-1.97E-09	9.01E-10

Restrictions are linear in coefficients.

Wald Test:

Equation: Untitled

Test Statistic	Value	Df	Probability
F-statistic	0.345597	(2, 18)	0.7124
Chi-square	0.691194	2	0.7078

Null Hypothesis: $C(6)=C(7)=0$

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(6)	0.005246	0.079526
C(7)	-0.053433	0.064273

Restrictions are linear in coefficients.

Observe that f-test has a p-value of 0.0194 for government capital expenditure is less than any alpha (0.05) level of significance. We reject the null hypothesis, implying that $c(4)=c(5)=0$. Meaning that influence of d (GCES (-1)), d (GCES (-2)) in the short run, affect RGDPS. The Wald tests were computed from the system equation generated from VECM. Recall that VECM examines the speed of adjustment from the short run dynamics to the long run equilibrium. Thus, the Wald test generated from VECM captures the coefficient restrictions thereby revealing short run effect.

Table 16: Pair wise Granger causality – South Africa

Pair wise Granger Causality Tests

Date: 08/13/16 Time: 10:50

Sample: 1 35

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GCES does not Granger Cause RGDPS	33	4.03269	0.0289
RGDPS does not Granger Cause GCES		0.67170	0.5189
GRES does not Granger Cause RGDPS	33	0.56304	0.5758
RGDPS does not Granger Cause GRES		2.21693	0.1277

The result in table 15 and 16 reveals that there is unidirectional causality running from public capital expenditure of South Africa to economic growth as indicated by p value 0.0194 in the Wald test and 0.0289 in pair wise granger causality.

Comparing the results of causality in both countries, the table shows that there is causality between capital and recurrent expenditure and economic growth in Nigeria. In South Africa, causality between economic growth and public capital expenditure is also revealed by the result.

VI. DISCUSSION OF RESULTS

Impact of Public Expenditure on Economic Growth of Nigeria

The analysis of the relationship between public expenditure and economic growth of Nigeria was done using vector error correction results presented earlier. From the results, the public capital expenditure has the p – value 0.0139 which is less than 0.05. This indicated that public capital expenditure has significant impact on economic growth in Nigeria. The coefficient of -0.035152 shows that GCEN has significant negative relationship with economic growth. The negative sign shows that public capital expenditure does not comply with the expected apriorio sign. The coefficient indicates that an increase in capital expenditure resulted to a decline in economic growth in Nigeria. The significant negative influence of public capital expenditure on economic growth may be due to incidences of fraud and corrupt practices associated with the execution of capital projects in Nigeria. Also, it reveals that government policies towards infrastructural development have not been effective.

The result of the study also reveals that public recurrent expenditure (GREN) has the coefficient value of - 0.030629 with the p –value of 0.0058 which is less than 0.05. The study concludes that it has significant negative impact on economic growth of Nigeria, implying that a rise in recurrent expenditure will result to a decline in economic growth in Nigeria. This result is in contrast to popular economic theory which posits that increase in public expenditure will spark off economic growth of any economy.

The study is of the view that public expenditure in Nigeria has not played its expected role in economic growth of the country. Over the years there have been consistent rise in public expenditure due to increase in oil revenue even though this has not translated to any meaningful development in the economy.

The study also observes that the proportion of the recurrent expenditure to the total expenditure in Nigeria is above 70 percent in favour of recurrent while very poor proportion is allocated for capital expenditure, this runs contrary to international best budgetary practices. This shows that government has favoured recurrent expenditure at the detriment of the capital expenditure. This may be attributable to expansion of government expenditure as the

number of workers on her payroll increases, coupled with frivolous overhead claims, wages and salaries of workers have been on the increase.

For the economy to develop, capital expenditure ought to have constituted greater proportion of the public total expenditure in order to put structures in place to boost economic growth and development of the country. But this is lacking in Nigeria resulting to high rate of poverty, unemployment, poor infrastructural facilities, and the collapse of many industries, low per capita income and poor standard of living. This justified the negative significance of public capital expenditure and negative impact of recurrent expenditure on economic growth within the period under review.

Gross capital formation (GCFN) is statistically significant since its value of 0.0439 is less than 0.05. It has the coefficient of -0.003959 indicating that an increase in gross capital formation resulted to a decrease in economic growth in Nigeria. The negative sign of the gross capital formation reveals that it has negatively impacted on the Nigeria economic growth within the period under review.

The balance of trade (BOTN) has the p value of 0.0000 which is less than 0.05 and coefficient of 7.13E-06 showing a positive relationship with economic growth of Nigeria. This reveals that it has impacted on economic growth in Nigeria hence fiscal policy and public expenditure tools should be applied to stimulate export of goods and services in the economy.

The error correction term (ECT) has the p value of 0.0000 which is less than 0.5. This indicates that ECT is statistically significant. The negativity of the coefficient (-0.202109) of the ECT shows its conformity with the a priori expectation. The negative sign and the significance of the ECT posited its adjustment to long run equilibrium. That is, the economic growth (GDPN) adjusts to changes in the explanatory variables as the explanatory variables continue to rise until short run disequilibrium is corrected in the long run. Therefore, in the long run public expenditure and other variables will adjust such that they impact positively on economic growth of Nigeria. These will solve the macroeconomic problem such as unemployment, poverty, low per capita income and poor standard of living in the country.

$$RGDPN = 5246.8 - 0.22GCEN + 0.19GREN + 3.55BOTN - 0.034GCFN - 2.17EXRN$$

The long run regression equation as indicated above is found from the normalized co integration result and the upper chamber of ECM. It indicates that capital expenditure has a negative relationship with economic growth and recurrent expenditure has a positive correlation with RGDP in Nigeria in the long run. The coefficient of capital expenditure in the long run is in tandem with the result in the short run. However, the recurrent expenditure runs contrary to its short run outcome indicating a positive relationship with RGDP, implying that public recurrent expenditure has a positive influence on economic growth of Nigeria in the long run.

The gross capital formation of Nigeria showed negative correlation with economic growth as in the short run, contrary to economic theory. The study observes that since private investment in Nigeria which is a significant component of GCFN is hardly captured into Nigerian data base, it might have contributed to this negative relationship; hence its influence is not felt in the GDP.

Impact of Public Expenditure on Economic Growth of South Africa

The vector error correction model (VECM) was used to analyze the impact of public expenditure on economic growth of South Africa. From the result, the public capital expenditure (GCES) is statistically significant with p value of 0.0143, its coefficient of -1.46E-09 reveals that it has negative impact on economic growth of South Africa. This shows that an increase in public capital expenditure resulted to a decline in economic growth of South Africa. The result is an indication that public capital expenditure in South Africa has not been able to spur economic growth of South Africa.

The public recurrent expenditure (GRES) is statistically insignificant as revealed by its p -value of 0.0635 which is greater than 0.05, its coefficient of 0.114564 indicated that an increase in public recurrent expenditure of South Africa resulted to increase in economic growth. The positivity of the coefficient is a reflection that it has impacted positively to the economic growth of South Africa. However, the result of the public capital expenditure (GCES) is not in tandem with the Keynes theory on public expenditure. The capital expenditure of South Africa has negative impact on economic growth instead of positive impact as postulated by Keynes. But the public recurrent expenditure of South Africa has a positive impact on the economic growth.

The research shows that balance of trade (BOTS) has the p value of 0.0021 and a coefficient of -0.003364 which indicates a negative significant impact on economic growth. The gross capital formation has the coefficient of 0.005719 with the p value of 0.2181 which is greater than 0.05. This indicated that gross capital formation (GCFS) has insignificant positive impact on economic growth of South Africa. The coefficient reveals that an increase in the gross capital formation resulted to an increase in economic growth of South Africa. Also, the exchange rate (EXRS) with the p value of 0.0059 and coefficient of 76.62484 indicated that it has significant positive impact on economic growth of South Africa.

The error correction term is statistically significant as revealed by its p –value of 0.0005. The coefficient of -0.466985 has the negative sign which conforms to a priori expectation. The negativity shows that economic growth (RGDPS) is below the equilibrium, therefore, the system will adjust until equilibrium is restored in the long run. In the long run, economic growth of South Africa will continue to adjust to the changes in public capital expenditure (GCES) public recurrent expenditure (GRES), gross capital formation (GCFS), exchange rate (EXR) and balance of trade to restore the equilibrium in the long run.

$$RGDPS = -14.37 - 2.35GCES + 0.53GRES - 0.013BOTS - 0.042GCFS + 410.9EXRS$$

The long run regression equation as indicated above is found from the normalized co integration result and the upper chamber of ECM. It indicates that capital expenditure has a negative relationship with economic growth and recurrent expenditure has a positive correlation with RGDP in South Africa in the long run. The coefficient of capital expenditure in the long run is in tandem with the result in the short run. However, the recurrent expenditure runs contrary to its short run outcome indicating a positive relationship with RGDPS, implying that public recurrent expenditure has a positive influence on economic growth of South Africa in the long run.

The gross capital formation of South Africa showed negative correlation with economic growth, contrary to economic theory. The negative relationship with GDP in South Africa may be attributed to corruption, inactive private sector participation in the economy, etc.

Causal Relationships between Public Expenditure and Economic Growth of Nigeria and South Africa

The results of the study were analyzed using Wald/ Pair wise Granger causality test. The test shows that there is causality between public expenditure and economic growth of Nigeria. These results are supported by the p values of 0.0436 & 0.0118 which is less than 0.05. The results entails that public expenditure in Nigeria exerts reasonable influence in the growth of Nigeria economy within the period under review. This finding is in line with Keynes theory of public expenditure. The rise in recurrent expenditure may have resulted to the rise in per capita income for over two decades. This has led to unprecedented rise in human capital development in the country which drives the growth process. This result agrees with Aregbeyen (2006), Ogbonna (2012) Chimobi (2009), Alimi (2014), Oyinlola and Akinnibosun (2013) who reported causality between government total expenditure and national income in Nigeria.

In South Africa, the result indicated that there is causality between public capital expenditure and economic growth. This shows that Keynes law holds for South Africa public capital expenditure. This result is in agreement with Essien (1997), Ansari and Gordon (2010) who found causality between public expenditure and national income in South Africa.

As the economic growth increase, the per capita income of South Africa rises. The increase in economic growth or national income of South Africa leads to increase in the role of government in the form of public, regulatory and protective activities. Also, the rise in economic growth has increased the urbanization and population density and the number of people looking for white collar jobs. To tackle these challenges, government has to ensure allocative efficiency in public expenditure in order to provide employment opportunities and reduce the level of unemployment in the country. The findings of these study is in line with the previous studies such as Bird (1971), Richard (1971), Ogbonna (2012), Sulaiman (2013), Menya and Yamane (2012) who were of the view that there is causality between public expenditure and economic growth.

Implication of the Result

Having analyzed the results for Nigeria and South Africa on the impact of public expenditure on economic growth, it was established that public capital and recurrent expenditure has significant negative impact on economic growth in Nigeria. This could be attributed to the poor budgetary implementation of capital projects as is evident in the power sector, transport sector especially the railway lines etc. These has seriously depleted infrastructural stock in the country such as roads, rail lines etc, thereby reducing the growth of gross capital formation which will speed up the growth of the economy.

Moreover, the negative significance of public recurrent expenditure entails that the continuous rise in recurrent expenditure has not translated to the growth of the economy. The government expenditure on human capital in the country has not promoted the quality of human capital needed in the country. Also, the rise in recurrent expenditure has not given rise to increase in per capital income and standard of living since the inception of civilian government in 1999 due to corruption.

The Wald/Pair wise Granger causality test for Nigeria indicates causality between public expenditure and economic growth. The implication of this result is that Keynes law holds for public expenditure in Nigeria. This finding agrees with the result of a similar study by Omoke 2009. Also it implies that the growth of Nigeria economy can be attributed to the available capital infrastructure in the country. This also shows that government policies towards human capital development have impact on economic growth. Therefore, increase in capital and recurrent expenditure resulted to recent economic growth of Nigeria.

In South Africa, the VECM result shows that public capital expenditure have significant negative impact on the economic growth of the country. This implies that increase in capital expenditure does not result to the growth of South Africa economy. Similarly, the Wald test result indicates causality between public capital expenditure and economic growth of South Africa. This implies that Keynes theory is applicable to capital expenditure of South Africa.

VII. CONCLUSION

This Study examined the relationship between Public expenditure and Economic growth in Nigeria and South Africa. The study used co integration techniques to investigate the relationship between Public expenditure and economic growth in Nigeria and South Africa. The presence of long run equilibrium found led to the use of Vector Error Correction Mechanism (VECM). (i) the trace statistics of the Johansen co integrating equation shows that there exist a long run equilibrium relationship between public expenditure and economic growth in Nigeria and South Africa (2) In Nigeria, the ECT has the expected negative sign with the coefficient of -0.202109, this implies that public expenditure adds 20.21 percent per year to economic growth for equilibrium to be restored in the long run. This result is supported by the ECT p value of 0.0000 indicating that it is statistically significant. The R – square is 0.873959 showing that 87.39percent variation in the dependent variable is explained by the independent variables while the remaining 12.61 percent is explained by other variables not captured by the model which is represented by error term (et) The F – statistics of 9.600802 with p value of 0.00013 which is less than 0.05 shows that the influence of explanatory variables on the dependent variables is statistically significant. This entails that all the independent variables jointly impact on economic growth in Nigeria as explained by 0.873959 coefficient of multiple determination. The DW has the value of 2.092488 . This indicates the absence of auto correlation among the residuals. In the case of South Africa, the error correction term which measures the speed of adjustment has the coefficient of -0.466985 with the p value of 0.0005 which is less than 0.05. This indicates the ECT is significant. This entails that public expenditure will contribute 46.69 percent to economic growth of South Africa per annum for equilibrium to be restored in the long run. The R – square which is the coefficient of determination has the value of 0.692579 indicating that 69.26 percent variation in the dependent variable is explained by the independent variables while the remaining 30.74 percent is explained by other variables not captured in the model but represented by the error term (et). The F – test determines the overall or joint influence of independent variables on the dependent variable. F statistics of 3.119354 with the p value of 0.013496 which is less than 0.05 indicated that all the independent variables have joint impact on economic growth of South Africa. The Durbin Watson test determine the presence or level of autocorrelation among the residuals, since the DW is 1.97466, it reveals that there is no auto correction among the residuals. (3) The result of Wald test in Nigeria reveals that there is causality between public expenditure and economic growth in Nigeria. This is due to significance of their p values of 0.0436 and 0.0118 which are less than 0.05. This is in support of Keynes theory of public expenditure. The result of causality test in South Africa reveals causality between public expenditure and economic growth in South Africa validating the applicability of Keynes theory

Based on the findings, the study makes the following recommendations;

- Governments of Nigeria and South Africa should adopt a consistent fiscal policy measures that can entrench budget discipline, transparency and accountability aimed at increasing the standard of living by ensuring allocative efficiency in public expenditure.
- Governments of Nigeria and South Africa should adhere strictly to IMF recommended capital to recurrent budget ratio of 60:40 percent which will ensure that a reasonable proportion of the budget is dedicated to capital projects that has the capacity to stimulate economic growth and create employment.
- Government of Nigeria and South Africa should see government expenditure as the tool for economic stability through job creation.
- The Nigeria government should make concerted effort to diversify her productive base and move the economy away from oil based revenue as this will improve public expenditure programmes thereby stimulating economic growth.

Suggestion for further study

We suggest that further research on this subject could adopt budget variables and development indicators variables in other to determine the role of the budget process and impact of public spending on unemployment, inequality and poverty.

VIII. REFERENCES

- [1] Alimi, R. S. (2014). *A time services and panel analysis of government spending and national income*. MIRA paper 56994. pdf.
- [2] Alm, J., & Embaye, A. (2010). *Explaining the growth of government spending in South Africa*, *Economic Society of South Africa, South African Journal of Economics*, 78:2.
- [3] Ansari, M.I., Gordon, D.V. & Akuamoah, C. (2010). *Keynes versus Wagner: Public expenditure and national income for three African countries*, *Applied Economics*, 29(4), pp. 543 -550.
- [4] Aregbeyen O. O. & Akpan U. F. (2013). *Long term determinants of government expenditure: A disaggregated analysis for Nigeria*. *Journal of studies in Social Sciences*, 5(1), 31-87
- [5] Aregbeyen O. (2006). *Co integration, causality and wagners law: a test for Nigeria*. *CBN Econ-Finance.Dev.44 (2)*, pp. 1 – 7
- [6] Babatunde, M.A. (2011). *A bound testing analysis of Wager's Law in Nigeria: 1970-2006*, *Applied economics* 43(21): 2843-2850
- [7] Bird, R.M. (1971). *Wagner's Law: a pooled time series and cross section comparison*, *National Tax Journal*, 38, 209 - 218
- [8] Buchanan, J.M. & Wagner, R.E. (1977). *Democracy in deficit: The political legacy of Lord Keynes*. Indianapolis, IN: Liberty Fund, Inc, 8.
- [9] *Central Bank of Nigeria (2011). Statistical Bulletin*, Retrieved from <http://www.cbn.gov.ng>
- [10] Chimobi O. (2010). *Inflation and economic growth in Nigeria*. *Journal of Sustainable development*, 3 (2), pp. 44 - 51
- [11] Essien, E.A (1997). *Public sector growth: An Econometric Test of Wagner's Law*. *Central Bank of Nigeria. Economic and Financial Review*, 35(3)
- [12] Garba & Abdulahi (2013). *Public expenditure and economic growth: an application of co-integration and granger causality test on Nigeria*. *Journal of Economic and Social Research* 15 (1), pp.1-30.
- [13] Gujarati, D. & Sangeetha (2005). *Basic econometrics*, New Delhi: Tata McGraw-Hill, Fourth Edition
- [14] IMF (2010). *Rebalancing growth: World Economic Outlook (WEC)*. *World Economic and Finance Surveys*.
- [15] Japhet T. T., Moses A.C. & Cyprian C.A. (2014). *Co integration analysis of public expenditures on tertiary education and economic growth in Nigeria*. *CBN journal of applied statistics* 5(2), December 2014
- [16] Jibri A. & Babayo H. (2015). *Government expenditure and economic growth Nexus: empirical evidence from Nigeria (1970 – 2012)*. *IORS Journal of Economics and Finance*, 6 (2), pp. 61 - 69
- [17] Johansen, S. & Juselius, K. (1990). *Maximum likelihood estimation and inference on co integration: with the application to the demand for money*. *Oxford Bulletin of Economics and Statistics*, 52:169-209
- [18] Kemi & Dayo (2014). *An analysis of the macroeconomic determinant of public capital spending in Nigeria*. *Journal of Economic and sustainable development*, 5(4), 2014
- [19] Keynes, J. M. (1936). *General theory of employment, interest and money*. New York. NY: Harcourt, Brace and Company, USA.
- [20] Koutsoyiannis, A. (2003). *Theory of Econometrics: An introductory expositiuin of Econometrics methods*. London Macmillian Press.
- [21] Letile, G. & David D. (2013). *An empirical examination of the relationship between government spending and economic growth in South Africa from 1980 – 2011*. *Mediterranean Journal of Social Sciences* 4(3) ISSN 2039-9340, ISSN 2039-2113.
- [22] Menyah, K. & Wolde-Rufael, Y. (2012). *Wagner's law revisited: a note from South Africa*. *South African Journal of Economics*, 80(2), 200–208
- [23] Odhiambo, N. M. (2015). *Government expenditure and Economic growth in South Africa. An emirical investigation*. *Atlantic Economic Journal*, 43 (3), pp. 393 – 406, 2015
- [24] Odo, S.I, Igberi, C.O & Anoke, C.I. (2016). *Public debt and public expenditure in Nigeria: A causality analysis*. *Research Journal of Finance and Accounting*, 7 (10), pp. 27 - 38
- [25] Ogbonna, B. C. (2012). *Does the wagner's law hold for Nigeria? 1950-2008*. *Journal of Research in National Development*, 10 (2), pp. 290 - 299
- [26] Okeke, M. (2008) *Budget as Growth Driver*. *Zenith Economic Quarterly*.1:1-2 www.zenithbank.com.
- [27] Omoke, P. (2009). *Government expenditure and national income: A causality test for Nigeria*. *European Journal of Economics and Political Studies*, 2(2).
- [28] *State Partnership, Accountability, Responsiveness and Capability Programme (SPARC, 2014a) Theory of change: synthesized and Abridged. Working paper August, Abuja: SPARC.*
- [29] Soludo, C. C. (2007). *Nigerian economy: can we achieve vision 20: 2020? Brief Series*, Research and Statistics Department, Central Bank of Nigeria., 25: 16-28. www.cenbank.org
- [30] *South Africa Reserve Bank (2014). Public finance statistics of South Africa, June 2014*
- [31] Suleiman, D. (2013). *Public finances and economic growth in Nigeria: Fiscal policy implication in crisis Era*. *Public and Municipal Finance* 1 (2), 2013
- [32] Usenobong, A. (2011). *Co integration, causality and Wagner's hypothesis: Time series evidence for Nigeria (1970 – 2008)*. *Journal of Economic Research* 16: 59-84
- [33] Usman, A., Mobolaji H.I, Kilishi A.A, Yaru, M.A, & Yakubu, T.A (2011) *Public expenditure and economic growth in Nigeria*. *Asian Economic Finance Development* 1 (3): 104-113
- [34] *World Bank Development Indicator (2014)*.