

PUBLIC DEBT AND ECONOMIC GROWTH IN NIGERIA

ABSTRACT

This study empirically analyzed the relationship between public debt and economic growth in Nigeria from 1980-2015. The study adopted integration approach in its econometric data analysis. The variables used in the study include real gross domestic product (RGDP), foreign debt, domestic debt and domestic private savings. The results of the study indicate. (i) External debt has significant negative impact on economic growth within the period under study. (ii) Domestic debt (DMD) has significant negative relationship with economic growth within the period under consideration. (iii) External debt and domestic debt granger cause RGDP in Nigeria with causality running from external debt and domestic debt to RGDP. The implication of this result is that the negative correction between debt stocks and economic growth which is contrary to apprior expectation may be highlighting the misappropriation and application (corrupt practices) of the borrowed funds. Based on findings, the study recommends therefore that (i) Government should reduce external debt and the ones obtained should be strictly use for purposes intended to ensure positive effect. (ii) Government should cut down on domestic borrowing and ensure that the existing ones are applied for purposes intended to ensure positive effect and through growth. (iii) With the evidence of negative causality running from both external and domestic debt stock to economic growth (RGDP) suggests that government should cut down in both borrowings to ensure economic stability and sustainable growth.

1.1INTRODUCTION

Public debt increase in developing countries of the world is now a global concern, following the fall in oil prices, variation on exchange rate etc which has brought adverse effect to some developing nations of the world such as Nigeria. Also in reflecting on the economic implication of the country's growing debt record, it is a very important policy issue which needs broad public debate. And it is important to note that; the degree of country's indebtedness is one of the major problems that most developing nation at the commencement of the 21st Century is facing. Therefore increasing levels of public debt of a country may been seen to be harmful for economic growth and development of that country (Obademi, 2012). Public debt therefore refers to amount of money that federal government, state government and local government owe at any time (Keiichiro, 2013). Public debt accrues when the government is experiencing budget deficit. Public debt can also been seen as all the amount of money owed by government in all levels which is in the form of services like pension payment owing to his employee both domestically or externally, or any contract entered by government and could not pay. If government is having budget deficit difficulties and the government had gained the trust in the world and her economies are strong, such government can raise money through issuing their bonds for other

nations, individuals and groups to come and buy. This is accompanied with government promises to pay them back at a certain time with fairly interest rate. Any government who lack trust in the world to issue bond for people to purchase will be left with no option than borrowing from either external institutions or domestic institution with unfavorable or favorable interest rate. Government of all levels can default their debt, and in order to avoid default on public debt supranational like the International Monetary Fund are invested with great power by the international community to make sure that nations will not default and also to control numerous financial issues if there is any signal to show that the nation want to default. In the other hands, if state or local government default their debts the country would pay the debt. If budget deficit of any government rises, it will lead to increase on public debt if the country has no alternative means to get money in order to offset budget deficit. Public debt can be classified into different types such as long-term debt when the debt is expected to last for a longer period of time and short-term debt if debt is designed to last for one or two years only. Again it can be classified into external debt and domestic debt and for the purpose of this study, the researcher would concentrate on external debt and domestic debt as types of public debts to know which one contribute more to the economy and why it contribute more. External debt according to Faraji and Makame (2013) refers to any financial resources which government, organization are using that are borrowed from the foreign counties other than the country own resource. External debt is also known as any kind of business funding you acquire from sources outside the country. Whether it is borrowing from Bank, investments from private individuals or investment firms, it has merit and demerit, therefore anyone who wants to borrow from international institutions should consider the advantages and disadvantages associated with it before set out to secure the fund. Domestic Debt is defined as debt that government borrowed within the country, it involves the same currency. Therefore all the debt owed to holders of Government securities such as Treasury Bills and Treasury Bonds internally is regard as domestic debt (Babu, Symon, Aquilars, & Mose, 2015). Christabell (2013) defined economic growth as an increase in the total value of all final goods and services produced in an economy within a given period valued at market prices as adjusted for price changes plus the imputed value of the economy's produced goods and services that do not pass through the market channel minus net income from abroad. It is a rise in the ability of an economy to produce goods and services, when measured up to one period of time to another. Economic growth refers only to the quantity of goods and services produced; it says nothing about the way in which they are produced. There are about three ways by which economic growth can be measured in a country. These are: the output (product) method, the income method and the expenditure method. Economic growth can be either positive or negative. Positive growth means that the economy is growing or booming while negative growth can be referred to by saying that the economy is shrinking. It is associated with economic recession and economic depression. Gross national product (GNP) is sometimes used as an alternative measure to gross domestic product. In order to compare multiple countries, the statistics may be quoted in a single currency, based on either prevailing exchange rates or purchasing power parity. Then, in order to compare countries of different population sizes, the per capita figure is quoted. According to Obademi (2012) the composition of country's debt influences the citizens, government, private enterprise such as banks and subsequently the entire economy. Therefore public debt size and the amount which was needed to repair such debts as well as its attendant likely effects all operating sectors of the economy particularly the banking sector, thus the growth of the economy at large should be greatly considered before borrowing money either externally or internally. He opined that country borrow for the following three reasons: when

government expected revenue is less than their proposed expenditure (budget deficit) in a particular fiscal year and the country borrow to finance budget deficit; again when debt arise from the execution of monetary policy (the purchase and sale of treasury bills in the open market operations) and also that government borrow to finance an important capital projects like water dam , river basin development project and agricultural development projects. Tajudee (2012) assert that domestic debt rather than external debt will encourage economic growth in Nigeria. As the repayment of the principal and interest on such domestic debt is a reinvestment into the country which would usually have a chain investment effect on the domestic economy. But external debt, more resources will be required to pay back and service the debt and this would weaken the positive effect of this debt on economic growth. Therefore he advised that government should rely more on domestic debt in stimulating growth rather than external debt. In spite of how attractive foreign borrowing may look, governments may possibly still look toward domestic because of the following benefit of domestic borrowing. (i) the supply of foreign (concessional) financing may be determined by the aid agencies' budget and their assessment of the economic performance in the beneficiary country. (ii) global aid is very frequently connected to project financing and can so not finance government's recurrent expenditures or capital projects not supported by donors. Therefore, governments with huge recurrent budget deficits may be forced to tap into domestic savings, including through issuance of domestic debt, to close their budget gaps. Domestic debt also can be used to accomplish monetary policy targets. Particularly in the countries with huge balance of payments surpluses, created by big aid inflows or oil exports, for example. In those circumstances, the inflows of foreign exchange increases liquidity which could undermine macroeconomic stability and the central banks often decide to intervene by selling government or central bank bills to stem inflationary pressures from excess liquidity (Jakob, 2004). While José, Ferreira-Lopes and Tiago (2012) in their study are of the opinion that judicious use of public debt resources whether external or domestic is what will determine its impact on economic growth of any nations. Hence Public debt can be useful for countries if it is directed to research and development (R&D), education, training, and investments that support economic growth. Mismanagement of public debt causes unpleasant and negative effects on economic growth. In case of Nigeria Pattillo, Poirson and Ricci (2002) investigated to know why the increased levels of accumulated debt lead to lower growth. They argued that the best reason is because of debt overhang theories, which explained that if there is, some possibility that, in the future, debt will be bigger than the country's capacity for repayment; projected debt-service costs will discourage further domestic and foreign investment and thus damage growth. Prospective investors will fear that the further a nation produces, the further it will be "taxed" by creditors to service the external debt, and so they will be less willing to acquire costs today for the sake of increased output in the future.

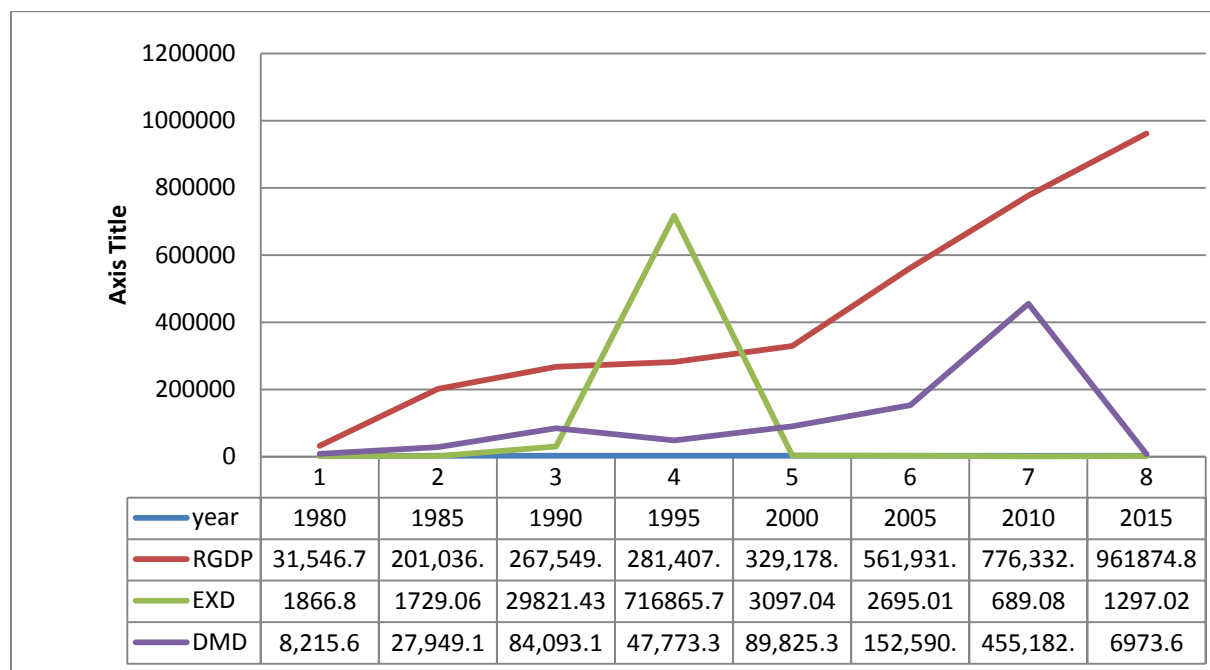
But in addition, the incentive effects associated with debt stocks tend to reduce the benefits to be expected from policy reforms that would enhance efficiency and growth, such as trade liberalization and fiscal adjustment: the government will be less willing to incur current costs if it perceives that the future benefit in terms of higher output will accrue partly to foreign lenders. Thus, some considerations suggest that, at reasonable levels of debt, further borrowing would be expected to have a positive effect on growth. Others stress that large accumulated debt stocks may be a hindrance to growth. Both these elements together imply that debt is likely to have nonlinear effects on growth. Although the debt overhang theories have not explicitly traced the

effect on growth, it may be possible to extend and translate the debt Laffer curve posited by these models into a Laffer curve for the effect of debt on growth. Since the peak of the debt Laffer curve shows the point at which rising debt stocks begin acting as a tax on investment, policy reforms, or other activities that require up-front costs in exchange for future benefits, the peak may relate to the point at which debt begins to have a negative marginal impact on growth.

1.2 Statement of Problem

It has been established that Nigeria's reliance on oil as the only source of income coupled with her steady negative trade balance as a result of the economy over reliance on import has contributed significantly to the volatile nature of the economy. The Nigeria economy benefited from the oil boom of the seventies in terms of cash flow to the economy but there seems to be little in terms of investment, and infrastructural development to support the productivity of the economy. Hence, the mono-cultural nature of the Nigeria economy, low per capita income, trade imbalances, persistent fiscal deficits, low productivity, unemployment and the attendant low savings level prompted the economy to seek other means to bridge the revenue gap especially due to the volatile nature of oil proceeds in the international market (Odo et al, 2016). Public borrowing either domestically or internationally consequently emerged as an alternative funding option for all tiers of government. As of December 31, 2015 the report by the Nigeria institution in charge of debt management (DMO) stated that the total debt of the country stood at N12.6 trillion (\$65.4 billion). The present debt report represents 11.5 percent of Nigeria's GDP of \$569 billion (2014). Nigeria's public debt rose by N1.3 trillion from N11.24 trillion recorded on December 31, 2014, to the latest figure. An investigation by Financial Nigeria of the country's debt stock proved that between January last year and June 30, the government raised its debt report by N825 billion. In addition during this period, the country's foreign reserves went down from \$34.5 billion reported on January 5 to \$29 billion at the end of June. Crude oil prices averaged \$53 per barrel in the 1st half of last year and in the 2nd half of the year 2015, when oil prices averaged \$42 per barrel, the government borrowed N484.9 (\$2.5 billion). Nigeria's foreign reserves as of December 31, 2015 were \$29.1 billion, according to data provided by the Nigeria appendix Bank. DMO reported that Nigeria's foreign borrowing reserve stood at N2.11 trillion (\$10.7 billion) as of December 31, 2015, while the domestic debt reserve of the state and federal government was N10.6 trillion (\$54.7 billion). The borrowing of the federal government within the country was N8.8 trillion (\$44.9 billion).

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180 **Figure 1: THE TREND OF RGDP, EXTERNAL DEBT AND DOMESTIC DEBT IN ₦BILLION.**



181
182 **Source: central bank of Nigeria statistical bulletin 2015**

183 Also in the above table, the trend analysis of real gross domestic product (RGDP), External debt
184 and Domestic debt using five (5) years interval for the period under review 1980-2015. Indicated
185 that in 1980 RGDP was ₦31546.76, external debt stood at ₦1866.8 while domestic debt was
186 ₦8215.6; but in 1995 RGDP increased to ₦201036.27, external debt decreased to ₦17.3 and
187 domestic debt also rise to ₦27,949.1; the period 1990 witnessed an increase in RGDP to
188 ₦267549.99, external debt was ₦298.6 and domestic debt rose to ₦84,093.10; year 1995 RGDP
189 increased to ₦281407.40, external debt increased to ₦716.9 and domestic debt also increased to
190 ₦477733.89; in year 2000 RGDP rose to ₦29178.74, external debt increased to ₦3097.4 and
191 domestic debt increased to ₦898253.90. During the period of 2005 RGDP increased to
192 ₦561931.93, while external debt declined to ₦2695.1 and domestic debt increased to
193 ₦1525906.60. In year 2010 RGDP increased to ₦776332.21 external debt decreased to ₦689.8
194 and domestic debt rose to ₦4551822.39; finally in year 2015 RGDP AND external debt
195 increased to ₦998762.31 and ₦1297.2 respectively while domestic debt declined to ₦6973.6.
196 there are inconsistency in the above trend, however, the traditional concern as seen in both
197 Keynesian and classical theorist about the desirability or otherwise of rising public debt
198 especially in developing economies like Nigeria is still with us. This worry regarding the
199 effective application of fund borrowed either domestically or internationally into productive
200 purpose is a major motivation for this study in the face of unprecedented records of corruption
201 among Nigeria public officers. This study, therefore evaluates the impact of both domestic and
202 foreign debt on the national output; determining whether public debt indeed is necessary for the
203 continued growth of the economy as postulated by Keynes or harmful to the economy as
204 canvassed by the classical and their followers.

1.3 Objective of the Study. The general objective of the study is to empirically analyze the impact of the public debt on economic growth of Nigeria within the period under review. The specific objectives of the research work are to:

1. Investigate extent to which foreign debt impact national output in Nigeria
2. Ascertain if domestic debt significantly impact national output in Nigeria.
3. Determine the degree of causal relationship existing between the explanatory variables and national output in Nigeria..

2. REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

Concept of Debt Overhang

According to Myers, (1977) Debt overhang is a concept that indicates that when debt burden is so large that an entity cannot secure an additional debt to finance future projects, even when the future projects are profitable enough to enable it to reduce its indebtedness over time. Debt overhang discourage current investment, since all earnings from new projects would only go to existing debt holders, leaving little incentive for the entity to attempt to free itself out of the burden. In the context of sovereign governments, the term refers to a situation where the debt stock of a nation exceeds its future capacity to repay it. Also debt overhang concept shows a condition in which a firm's debt is so huge that any income generated by new investment projects are completely appropriated by existing debt holders, and thus even projects with a positive net present value cannot reduce the firm's stock of debt or increase the value of the firm.

2.2 Theoretical Review

Classical Theory of Public Debt

The classical economists believed in "Laissez Faire" strategy, that the function of State ought to be minimal and the government had to sustain only internal law and order, defense from external antagonism and look after some public works. They are of the opinion that full employment exist in the economy and also that there is a perfect competition and mobility of factors for production in the market. Therefore they advocate that government should not intervene in the smooth running of economic activities and if there is any disasters that befall the economy that it will automatically bring itself to equilibrium point. Once the government is playing the minimal functions then public resources can now be reserved for other developmental purposes. In additional government did not require increased funds in the form of public debt and also that the government expenditure should not be wasteful and unproductive. As money supply is unchanging any sum that is transferred to the government would be at the cost of the private expenditure, private employment and the money borrowed will be put into unproductive uses than the productive channels.

Smith, (1776) in his theory stated that the problems of public debts are as a result of the following factors: a rise in the government expenses and also that the merchants have the ability to lend easily. So he opined that it is because of the understanding that there will be loans available in times when the state needed it that motivate the state not to have budgetary savings during peace time. As a result, in the war time, loans are raised to meet the additional expenditure. Smith disagreed with the notion that national debt is an additional capital in an economy; rather the fund represents the transfer of funds from the private into the public hands. This money are borrowed to meet war and other unproductive expenses, in regard to that public debt shift from putting capital into productive use to unproductive ones. When the public expense is defrayed, it is settled by the annual destruction of some capital which had before existed in the country; by the perversion of some portion of the annual produce which had before been destined for the maintenance of productive labour, towards that of unproductive labour.

Fortunately, during actual wars, the demerit in the form of reduction of capital on account of rising of public debts is to some extent compensated by additional savings of the people. But once peace is concluded, this merit disappears.

Say (1954) in his own view saw state government role in relation with his analysis of public finance. Unlike Smith, he detailed the more general aspects of the problem and gives reason for and highlights the benefits of public works, and communications. He stated that to comprehend public expenditure it is important to be familiar with the needs of society. Apart from the needs felt by individuals and families which result to private consumption, men in society have wants in common which can only be satisfied by the supportive effort of all the individuals making up society and this supportive effort can only be attained by an organization, who has the authority to ensure the obedience of all the people within the limits permitted by the form of State.

Say in his famous Laws of Market stated that 'Supply Creates its Own Demand'...and that the entire economy was self-regulating. Thus lowest amount of state action and government interference was recommended. He opposed public debt, to him there exist a notable difference between an individual borrower and a borrowing government, the later borrows capital for the purpose of the unproductive consumption and expenditure. He also stressed that Public borrowing is not only barren because the capital is consumed and lost, but because, the nation is burdened by the annual interest payment. It cannot be argued that the annual circulation of interest payment is a net addition to capital.

Ricardo, (1973) saw public debt as one of the most dreadfully sources which was even invented to afflict a nation. Ricardo made important modifications in the arguments of Smith and Say. He pointed out that important burden of national debt is found in the interest transferred annually, other than the lost of initial capital. He said that when the expenses of the years were twenty million and it is been raised through the means of loans, that it is twenty million which are withdrawn from the productive capital of the nation. This million per annum which is raised by taxes to pay interest of this ban is simply moved from those who pay it to those who receive it, from the contributor of the tax to the natural creditors. He argued that the presence of a debt cannot affect the nation capacity to pay taxes, therefore no great economic benefit could be achieved by retiring the debt and Levying of taxes to pay, the interest obligation may lead to capital movements to other countries.

Keynesian Theory of Public Debt

The Economic disaster shaped by the great depression of 1930's was in part responsible for the growth for modern theory of public debt. The conventional view that steady unbalanced budgets and fast increasing public debt impaired the financial stability of the nations, slowly gave way to Keynesian ideology. Keynes (1936) states that a large public debt is a national asset rather than a liability and that steady deficit spending is necessary to the economic progress of the countries. Keynes attacked the view of the classical that economy tends to equilibrium at full employment. Keynes argued that if there were unemployed resources, which the private sector could not employ, the resources can be put to use by the unbalancing budget. He is of the view that increase in public debt through the multiple effects would raise the national income. He associated public borrowing with deficit financing and agreed that government should borrow for all purposes so that efficient demand in the economy is increased which will result in increased employment and output. He did not differentiate between productive and unproductive expenditure as the classical. Keynes stated that borrowing for consumption was as important as borrowing for investment in productive goods because consumption expenditure induced investment to go up.

Balanced Growth Theory

Balanced growth theory as propounded by Nurkse, (1959) advocated that if production is increased that the increase should be distributed among all sectors of the economy according to the sectors demand, extensive use of capital by an individual entrepreneur in any particular firm will be unprofitable as a result of how small the size of the market may be, and a wise use of capital to wide range of different industries may raise the general level of economic efficiency and enlarge the size of market. He affirmed that investment in a wide range of industries leads to vertical and horizontal integration of industries, a better division of labour, a common source of raw materials and technical skill, an expansion of the size of the market and better utilization of social and economic overhead capital and also that investment in productive equipment and in human capital should be simultaneous, for investment in the former would be unless people are educated and are healthy to operate it. Nurkse pleads that social and economic overhead facilities should be created ahead of demand to stimulate and support the various sectors of the economy. Private enterprise in an underdeveloped country is incapable of taking advantage of these external economies because of its incapability to start a wave of capital investments on a wide range of projects. He believed that private enterprise can achieve the desired effect under the stimulus of certain incentives. He pleaded that ordinary price incentives may bring about balanced growth in a small degree. However, a wave of new applications of capital over a wide range of different industries can be promoted by the monetary effects of the initial investment and other effects. Nurkse doctrine of balanced growth state that there should be balance growth between different sectors of the economy during the process of economic growth. This implies that there should be a proper balanced between investment in agriculture and industry since agriculture and industry are complementary and an increase in an industrial output requires an expansion of agricultural output and if employment increases in the industrial sectors it will lead to an increase in the demand for foodstuff. He also declared that there should be balanced growth between the domestic sector and the foreign sector

3 Empirical Reviews

In the year 2016, Abula and Ben investigate the influence public debt on the growth of the Nigeria economy. The study tested for unit root test to ascertain the stationarity of the variables in the study and co integration test was tested to determine the long run relationship of the variables. The studied adopted vector error correction mechanism (VECM) and find out that external debt stock and external debt servicing have insignificant inverse correction with national output in Nigeria, though, domestic debt stock has a positive and significant association national output while domestic debt service payment was significant but inversely relationship with national output in Nigeria.

Lucy, Collins and Ernest (2016) examined the influence of public debt on the productivity of the economy of Ghana using the methodology of the simple Ordinary Least Squares (OLS) with the scope covering the period of 1990 to 2015. The variables used in the study are public debt (disintegrated into external and domestic) by testing three related models at the domestic and external levels including the general growth of the Ghanaian economy. In constructing our dataset, we build on the study of many scholars including a substantial amount of new materials from both primary and secondary data sources being Ministry of Finance (MOF) or Treasury Latest actual data: Government Finance Statistics Manual (GFSM), Ghana and World Bank. The result of the study indicated that there is a negative relationship between debt (domestic and external) and national output of the Ghanaian economy and recommend among others that

government debt borrowing should be discouraged while increasing the revenue base through tax reform programs is encouraged.

Igberi, Odo, Anoke and Nwachukwu (2016) studied the impact of increasing government borrowing on unemployment in Nigeria for a period covering 1980 to 2015. The authors adopted ARDL approach and Wald test statistical procedure in their analysis. The research revealed stable long run equilibrium relationship between government borrowing and unemployment. According to the findings of the research, there is positive significant relationship between government borrowing and unemployment, also, a negative relationship between growth rate of GDP and unemployment. Furthermore, an inverse relationship was also established by the study between inflation and unemployment. The study concluded that public debt has no significant influence in Nigerian economy considering that rising public debt has not reduced unemployment. In the opinion of the study, rising debt repayment interest has become an issue in implementing new projects in the economy which has also contributed to a rise in unemployment. Finally, the authors made the following suggestions; government borrowing should be restricted and invested on the sectors that can help create new jobs. Secondly, project funded by money borrowed should have capacity to generate profit that will be higher than the rate of servicing the loan from which the project is being funded. However, unnecessary internal borrowing should be avoided since it is known that it affects rate of invested and employment negatively.

Mohammed, Mahfuzul and Igwike (2015) observed the connection between economic growth and debt, they employed many advanced econometric tools to examine the issue in order to investigate the effect of government borrowing on national output in 48 economies all drawn from sub Sahara Africa from 1995-2012. The findings showed prove of economic linkage among public debt and national output in eight economies from the forty eight countries investigated which agrees with the debt Lafer Curve theory. The study also examined whether an economic association exist between public debt and national productivity, the result indicate a negative relationship among the two variables. The above results were subjected to advanced econometric analysis. The research concludes that there is a correction existing between politics and physical policy and recommended the need to consider the impact of policy implementation on the growth of the economy. In the opinion of the study the ability of government to stimulate growth is highly limited in addition to the fact that if government borrowing becomes high it will affect the economy negatively.

Egbe and Aganyi (2015) analyzed the influence of foreign borrowing on national output in Nigeria. The researchers adopted VAR econometric methodology to evaluate the relationship between foreign borrowing and national output, using variables like; foreign borrowing (REXPT), INF, REXR, PUBINV and GDP. The result of the findings indicated that causality runs from foreign borrowing to national output. Variations in national output were difficult to be understood within the context of the changes seen in foreign borrowing. What this means is that many Nigerians go into borrowing for unproductive reasons rather than stimulation of the economy. According to the study, for borrowing to benefit the economy, fiscal prudence and commitment in managing people's fund should be the guiding principle for Nigerian leaders.

Siew-Peng and Yan-Ling (2015) examined to know the impact of government borrowing on economic progress made in Malaysia for a period spanning from 1991 – 2013. The research also examined other measures of government borrowing like, excess of expenditure over government revenue, government spending, servicing of foreign borrowing and public utilization of resources and their influence on economic progress. The findings of the research agree with other

empirical works on the subject with results showing inverse relationship between public debt and economic growth. More so, the result also revealed a long term inverse relationship between government borrowing and national output in the economy of Malaysia. The authors concluded that the variables of the study were decreasing function of national output.

Babu, Symon, Aquilars and Mose (2015) explored the influence of internal borrowing and its contribution to national output in eastern Africa over the period 1990 – 2010. The research was anchored on Solow growth model and tested for stationarity of the variables and also adopted a panel data approach. Panel fixed effects model specified by Hausman test was used for selection, which was also corrected for heteroscedasticity. The results showed that domestic borrowing has a positive major relationship on GDP per capita growth rate in the EAC. The essence is to promote sustainable levels of domestic borrowing to enhance growth.

Jernej, Aleksander and Miroslav (2014) observed the direct effect of high debt burden on the growth of the economy of those EU countries currently involved in global debt crisis the research fundamentally involved a data set of 25 independent European Union economies. The statistics used for the research were drawn from old member state and new member state spanning through 1980-2010 and 1995-2010 respectively. A debt to GDP ratio was adopted to enable the study understand the impact of the debt on real growth. The findings of the research indicate that debt has reasonable influence on GDP growth.

Ngerebo-A (2014) investigated the correction among internal borrowing and poverty in Nigeria for a period covering 1986 – 2012, adopting VAR technique, Cointegration and Granger causality econometric methodology. The result of the cointegration test indicated an affirmative link between poverty and domestic debt. The research further revealed that the coefficient of domestic debt were positive and highly significant as it relates to bank loans. The borrowing described above relates to rural development intended to change rural – urban migration, increase the rate of development of industry and create opportunities for the product of the country's manufacturing sector and by implication enhancing the life of rural dwellers. According to the study, there is need for the government to pay off all internal outstanding borrowing as this will enhance monetary policy management. The study concluded that uncontrolled domestic debt influences national output inversely. The study suggested further the authorities should make available funds at lower interest rate to encourage investors.

Faraji and Makame (2013) examine the influence of foreign borrowing on increase in national productivity of Tanzania spanning from 1990-2010. The research adopted time series statistics on foreign borrowing and economic progress. In the opinion of the research, foreign borrowing assists emerging economies to attain to their development aspirations. In the other hand, servicing of government borrowing encourages development by assuring that creditors have implied confidence on the borrowers. The statistics used for the study was from the Apex bank from Tanzania, financial statistics from the presidency, information from ministry of finance in Tanzania added to the statistics from World Bank and IMF. According to the study, a positive reasonable influence exists between foreign borrowing and repayment of debt and national output. The volume of debt maintained affirmative effect while repayment of debt has inverse relationship with national output. According to the result, there was evidence of non existence of long run relationship between foreign borrowing and national productivity. Finally, the authors suggested further research on this subject especially foreign borrowing and foreign direct investment and influence of foreign borrowing on internal revenues.

Godfrey and Mutuku (2013) examined the relationship between internal borrowing and national output in Kenya. They examined empirically using sophisticated statistical procedure with time series statistics from 2000-2010. The stationarity property of the variables was examined using

437 augmented Dickey fuller including the text of long run relationship. The findings indicate that
 438 increase in the internal borrowing in Kenya has affirmative influence on national output. The
 439 study recommended increase in internal borrowing in as much as the money borrowed are
 440 commented into productive activities.

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 442 **2.4 Gap in Empirical Literature**
 443 Gap in empirical literature entails critically evaluating empirical literature review to know what
 444 have been done, what have been done but not properly done and also what the other studies had
 445 failed to do in terms of the following: (a) variables employed or used, (b) methodology employed
 446 in the studies, (c) geography (where the studies were conducted) and (d) Time (period covered
 447 by the studies) which will be considered to justify the need for the current study. Below is

448 **Table 1: summary of the major gap in literature.**

Author	Topic	Methodology	Variables used	Findings	Gap
Lucy, Collins and Ernest (2016)	examined the influence of public debt on the productivity of the economy of Ghana	Ordinary least square (OLS)	The variables used in the study are public debt (disintegrated into external and domestic and GDP	The result of the study indicated that there is a negative relationship between debt (domestic and external) and national output of the Ghanaian economy.	The study was carried out in Ghana while the current study is carried in Nigeria, the study used OLS econometric method of analysis while the current study adopted vector error correction mechanism (VECM)
Ngerebo-A (2014)	investigated the correlation among internal borrowing and poverty in Nigeria for a period covering 1986 – 2012,.	vector autor regressive econometrics model (VAR)	poverty and domestic debt.	The result of the cointegration test indicated an affirmative link between poverty and domestic debt. The research further revealed that the coefficient of domestic debt were positive and highly significant as it relates to bank loans	The study used vector autor regressive econometrics model (VAR) while the current study adopted vector error correction mechanism (VECM) and also that current study would update the work to 2015.
Faraji and Makame (2013)	examine the influence of foreign		The variables used are foreign	According to the study, a positive reasonable influence exists	The study was carried out in Tanzania while the current study was

examine the influence of foreign borrowing on increase in national productivity of Tanzania spanning from 1990-2010	borrowing on increase in national productivity of Tanzania spanning from 1990-2010		borrowing and repayment of debt and national output.	between foreign borrowing and repayment of debt and national output.	in Nigerian the scope of the work was 1990-2010 while the current study scope was from 1980-2015 and the current study will update to 2015.
Godfrey and Mutuku (2013)	Examined the relationship between internal borrowing and national output in Kenya.	Autoregressive distributed lag model (ARDL)	internal borrowing and national progress (GDP)	The finding indicates that increase in the internal borrowing in Kenya has affirmative influence on national output.	The study was done in another country while the current study is carried out in Nigeria, also the study used ARDL econometric method of analysis and the current study used VECM econometric method of analysis
Igberi, Odo, Anoke and Nwachukwu (2016)	the impact of increasing government borrowing on unemployment in Nigeria.	Autoregressive distributed lag model (ARDL)	Government borrowing, growth rate of GDP, inflation and unemployment.	The research, there is positive significant relationship between government borrowing and unemployment, also, a negative relationship between growth rate of GDP and unemployment. Furthermore, an inverse relationship was also established by the study between inflation and unemployment.	This study used autoregressive distributed lag model (ARDL) while the current research will use VECM; the variables of the study is different from the variables that the current research will use such as domestic private savings.
Siew-Peng and Yan-Ling (2015)	the impact of government borrowing on economic progress made in Malaysia for a period spanning from 1991 – 2013.	Vector error correction mechanism (VECM) econometric method of analysis	excess expenditure, government revenue, government spending, servicing of foreign borrowing	Results showed inverse relationship between public debt and economic growth and also long term inverse relationship between government borrowing and national output in the economy of	This research work was carried out in Malaysia while the current research is in Nigeria.

			and public utilization of resources and economic progress (GDP).	Malaysia.	
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Source: Researchers' computation from E-view 7

From the table of the summary of the major gap in literature it was discovered that the following gap exists:

Some of the reviewed studies were carried out in other countries as seen in (Faraji and Makame, 2013; Siew-Peng and Yan-Ling, 2015; Godfrey and Mutuku 2013 and Lucy, Collins and Ernest, 2016) thereby creating a geographic gap

Also some of the reviewed studies used OLS, ARDL, respectively as witnessed in (Ngerebo-A, 2014; Igberi et al 2016; Lucy, Collins and Ernest, 2016 and Godfrey and Mutuku 2013) providing gap in the methodology used

The variables in the studies reviewed are different from the current research variables as seen in (Igberi et al 2016) leading to gap in the variable used.

The current study updated the following (Faraji and Makame, 2013 and Ngerebo-A, 2014) to 2015 providing time gap.

4. DATA AND METHOD OF ANALYSIS

4.1 Data

The data for this study covered the period of 1970 -2015 and were sourced from Central Bank of Nigeria Statistical Bulletin and online source from data.worldbank.org/indicators, all within the period under consideration.

4.2 Model Specification

This research work is anchored on Keynesian theory which states that a large public debt is a national asset rather than a liability and that steady deficit spending is necessary to the economic progress of the countries (of public debt assumed full employment). He attacked the view of the classical that economy tends to equilibrium at full employment. Keynes argued that if there were unemployed resources, which the private sector could not employ, the resources can be put to use by the budget deficits. He is of the view that increase in public debt through the multiple effects would raise the national income. He associated public borrowing with deficit financing and agreed that government should borrow for all purposes so that efficient demand in the economy is increased which will result in increased employment and output. He did not differentiate between productive and unproductive expenditure as the classical. Keynes stated that borrowing for consumption was as important as borrowing for investment in productive goods because consumption expenditure induced investment to go up. Therefore this study adopted and modifies the Keynesian national income model used by Odo, Igberi and Anoke (2016) as developed by Barro (1974), Greiner and Keller (2007). The model is stated as follow

$$Y = C + I + G + NX \quad (1)$$

Where Y stands for income (proxied with RGDP), C stands for private consumption, I stands for private investment, G stands for government expenditure and NX stands for net export.

Thus, in order to investigate the impact of public debt on the economic growth in Nigeria income is proxied with real gross domestic product (RGDP), and public debt (disaggregated into external

debt and domestic debt), therefore equation (1) is transformed to obtain equation (2) which is stated functionally as

$$RGDP = f(EXD, DMD, DPS) \quad (2)$$

This will be linearly specified as:

$$LRGDP_t = \beta_0 + \beta_1 LEXD_{t-1} + \beta_2 LDMD_{t-1} + \beta_3 LDPS_{t-1} + \mu_t \quad (3)$$

Where $LRGDP$ = Logarithm of $RGDP$ been proxy for national output, $LEXD$ = Logarithm of external debt, $LDMD$ = Logarithm of domestic debt, $LDPS$ = Logarithm of domestic private savings, β_1 - β_3 are Coefficients of the parameters, β_0 = Constant and μ_t = error correction term.

4.3 Data Discussion

The variables specified in this research work are discussed below

RGDP which stands for real gross domestic product: This according to economists refer to the total worth of product produced in the economy in a particular year valued at market prices as adjusted for price changes plus the imputed value of the economy's produced goods and services that do not pass through the market channel minus net income from abroad. The Real GDP is calculated as follow the current price of value of final goods and service divided by the price of base year value of final goods and services multiply by hundred percent (100%)

External Debt (EXD): means any financial resources which government, are using that are borrowed from the foreign countries other than the country own resource. It is also known as any kind of business funding you acquire from sources outside the country whether it is borrowing from Bank, investments from private individuals or investment firms.

Domestic Debt (DMD): is defined as debt that government borrowed within the country, it involves the same currency. Therefore all the borrowing of federal, state and local government internally is regard as domestic debt.

Domestic Private Savings: This is an accumulation of capital by household and private sector which provide output for consumption in the long-run. It is also that part of income that is not consumed. A rise in domestic private savings leads to increase in capital formation and productivity which will lead to economic growth.

4.4 Estimation Procedure

(i) The study estimated the variables used in order to obtain the description/ summary statistics. The essence of this is to observe the characteristics of the data employed

(ii) The study tested for integration level of the data employed using unit root tests approach, to verify if the data are suitable for the purpose intended. It was discovered from the results of the unit root tests that the variables were all integrated of order one (1), meaning that all the variables were stationary at first difference.

(iii) With the fact that the variables were not stationary at level, the research suspects that there may be some co integrating vectors or equations. The researcher was advised to run co integration test to confirm the existence or otherwise of the stable long run relationship (co integration) between the dependent and the independents variables. The results confirmed the existence of co integrating vector among the variables.

(iv) With the existence of co integration established as indicated above, we are advised to employ the vector error correction mechanism (VECM) in the estimation of the research model to obtain the final results.

(v) The system equation of the VEC model was estimated to gauge for long run causality and establish the values of the coefficients of the independent variable to enable us interpret the results.

(vi) Finally we conducted granger causality tests in the VEC environment to estimate the direction of the influence between the dependent and independent variables.

5. PRESENTATION OF RESULTS

5.1 UNIT ROOT TEST RESULTS

After collecting data with the aid of important tools and method, the next essential step is to present the result, analyze and interpret the result with aim of getting the empirical solution to the problem identified in the research work. So data analysis means operating on the data to get the pattern and trends in data sets. Data analysis is a very vital step and it is the heart of every research work. Therefore the results for the data analysis are presented here.

Unit Root Test

The Augmented Dickey-Fuller (ADF) statistic was employed to test for the existence of unit roots in the data using trend and intercept. The test results are presented below:

Table 2: Augmented Dickey Fuller Unit Root Test

Trend and Intercept (Series at Level)

Series	ADF Test Statistic	5% Critical values	10% critical values	Remarks
RGDP	-0.388518	-3.544284	-3.204699	Not Stationary
EXD	-3.082272	-3.544284	-3.204699	Not Stationary
DMD	-2.555948	-3.544284	-3.204699	Not Stationary
DPS	-1.770258	-3.544284	-3.204699	Not Stationary

Sources: Researcher's compilation from E-views

Table 3: Augmented Dickey Fuller Unit Root Test

Trend and Intercept (Series at 1st Difference)

Series	ADF Test Statistic	5% Critical values	10% critical values	Remarks
RGDP	-9.467206	-3.548490	-3.207094	Stationary
EXD	-6.580523	-3.548490	-3.207094	Stationary
DMD	-7.133272	-3.548490	-3.207094	Stationary
DPS	-9.734730	-3.548490	-3.207094	Stationary

Sources: Researcher's compilation from E-views 7

Table 4: Phillips Perron Unit Root Test

Trend and Intercept (Series at Level)

Series	PP Test Statistic	5% Critical values	10% critical values	Remarks
RGDP	-0.388518	-3.544284	-3.204699	Not Stationary
EXD	-3.082272	-3.544284	-3.204699	Not Stationary
DMD	-2.714346	-3.544284	-3.204699	Not Stationary
DPS	-1.636948	-3.544284	-3.204699	Not Stationary

Sources: Researcher's compilation from E-views 7

Table 5: Phillips Perron Unit Root Test
Trend and Intercept (Series at 1st Difference)

Series	PP Statistic	Test Critical values	5% critical values	10% critical values	Remarks
RGDP		-8.991068		-3.548490	-3.207094
Stationary					
EXD		-9.077179		-3.548490	-3.207094
Stationary					
DMD		-7.351574		-3.548490	-3.207094
Stationary					
DPS		-20.68910		-3.548490	-3.207094
Stationary					

Sources: Researcher's compilation from E-views 7

5.2 MODEL ESTIMATION, DATA ANALYSIS AND PRESENTATION OF RESULTS

5.2.1 Co-integration Test

Johansen co-integration test was used to test for the presence of co-integration between the series of the same order of integration. Johansen co-integration test for the series; RGDP and the explanatory variables; EXD, DMD and DPS are summarized under table 5. Based on the lag length criteria, the model with lag 1 was chosen with the linear deterministic test assumption.

Table 6: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No.of CE(s)	Eigenvalue	Trace statistics	0.05 Critical value	Prob**
None *	0.680447	70.10833	47.85613	0.0001
At most 1 *	0.443293	31.32005	29.79707	0.0331
At most 2	0.272567	11.40568	15.49471	0.1877
At most 3	0.017081	0.585760	3.841466	0.4441

Source: Researchers' computation from E-view 7

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

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

5.2.2 Vector Error Correction Model Result

The essence of this estimation procedure is to ascertain the speed of adjustment since the deviation from the long run equilibrium is corrected through the short run adjustments. Having established that there is co-integration equation among the variables, the study validates the reason to estimate the vector error correction model (VECM). The result for the VECM is stated in table 7 below:

Table 7: SYSTEM EQUATION RESULT

Dependent Variable: D(RGDP)

Method: Least Squares

Date: 08/04/16 Time: 09:36

Sample (adjusted): 4 36

Included observations: 33 after adjustments

D(RGDP) = C(1)*(RGDP(-1) - 291.613393198*EXD(-1) - 0.441368941826

*DMD(-1) - 2.41271892236E-08*DPS(-1) + 340223.500151) + C(2)

*D(RGDP(-1)) + C(3)*D(RGDP(-2)) + C(4)*D(EXD(-1)) + C(5)*D(EXD(

-2)) + C(6)*D(DMD(-1)) + C(7)*D(DMD(-2)) +

C(8)*D(DPS(-1)) + C(9)

*D(DPS(-2)) + C(10)

	Coefficient	Std. Error	t-Statistic	Prob.
ECM (1)	-0.665964	0.007070	-3.672450	0.0013
RGDP=(-1)	0.319966	0.145671	2.196491	0.0384
RGDP=(-2)	-0.116213	0.075769	-1.533781	0.1387
EXD=(-1)	-0.808346	0.783501	-2.805225	0.0100
EXD=(-2)	-0.732557	0.583046	-0.670742	0.5091
DMD=(-1)	-0.012227	0.004514	-2.708624	0.0125
DMD=(-2)	-0.013767	0.003658	-3.763535	0.0010
DPS=(-1)	0.16E-09	0.20E-09	0.965975	0.3441
DPS=(-2)	-0.18E-10	0.34E-09	-0.311354	0.7583
C(10)	1.9709.52	4.598454	4.286119	0.0003

R-squared=0.777412, F-statistics= 8.925560, Prob(F-statistics) 0.000012, DW=1.86

Source: Researchers' computation from E-view 7

With this approach, both the long run equilibrium and short run dynamic relationships associated with variables under study is established.

618 **Table 8: Granger Causality Test**

Pairwise Granger Causality Tests

Date: 08/04/16 Time: 09:39

Sample: 1 36

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
EXD does not Granger Cause RGDP	34	2.96518	0.0348
RGDP does not Granger Cause EXD		0.06793	0.9345
DMD does not Granger Cause RGDP	34	2.75291	0.0204
RGDP does not Granger Cause DMD		0.01865	0.9815

619 From the table 8 above, the result indicate causality flowing from both external and domestic
620 debt to real gross domestic product as validated by the F-statistics probability which are less
621 that 5% level of significance.

622 **6. DISCUSSIONS OF RESULT**

623 **6.1 RESULTS**

624 The findings of the result are discussed in order to bring out the basic information gotten from
625 the analysis of each variable in the model estimated and also to link the discussion of the
626 findings with the existing theory on the particular research work.

627 **Unit Root Test**

629 The ADF and PP result conducted showed that the variables; DMD, EXD, DPS and RGDP, all
630 series happened to be not stationary at level. Though, the series became stationary at first
631 difference that is 1(1). The results showed order 1(1) co- integration.

632 **Co-integration Test**

633 Based on result of co-integration test carried out, it indicated 2 co-integrating equations showing
634 long term association existing among external debt, domestic debt and national output proxy
635 with (RGDP). As observed from first and second result of t-statistics, its result became more in
636 value than 5% critical value (i.e. $[70.10833 > 47.85613]$ and $[31.32005 > 29.79707]$ while other
637 trace statistics are less than the 5% critical values such as $[11.40568 < 15.49471]$ and $[0.585760 < 3.841466]$. Since the first and second result of the t-statistics indicated significantly more than
639 0.05 critical values. Then; study reject null hypothesis that there is no long run relationship
640 existing among the variables and conclude that there is a long run relationship since there is at
641 least one co- integrating equation at 5% level of significant.

642 **Vector Error Correction Model**

643 ECM which stands for error correction model met required conditions. Result of the ECM
644 was significant indicating that inverse and statistical significant of ECM coefficients are
645 essential conditions in order that any disequilibrium to be corrected. In light of this, the
646 coefficient of ECM (-1) = -0.665964. Inverse result of ECM satisfied one condition and the
647 P-value $[0.0013] < 5\% [0.05]$ critical value satisfied the 2nd condition of been statistical
648 significance. Result of ECM with the coefficient of (-0.665964) indicated that the speed of

adjustment amid the short run dynamics and the long run equilibrium is 66%. Thus, ECM will adequately act to correct any deviations of the short run dynamics to its long-run equilibrium by 66% annually.

Computed coefficient of multiple determination (R^2) value of 0.777412 showed that 77.7% of total change in economic growth is accounted for, by the explanatory variables: external debt (EXD), domestic debt (DMD) and domestic private savings (DPS) while 22.3% of the changes in economic growth (proxy with RGDP) can be attributed to other factors not included in the regression equation influence. F – Statistics = 8.925560, with p value of 0.000012 which is less than 0.05 shows that explanatory variables jointly influence dependent variable significantly. Result of DW which stands for Durbin Watson is used to determine if there is autocorrelation among residuals, since the DW has the value of 1.86; it indicates the absence of auto correlation among the residuals.

Causality Test

As indicated above, the ECT (-1) is negative, fractional and significant revealing causality among external debt, domestic debt and national output proxy with (RGDP). Based on p-values of explanatory variables, causality runs from external debt to RGDP as seen in probability value of 0.0100 and another link from domestic debt to economic growth as witnessed by 0.0125 probability value.

5.2 IMPLICATION OF THE RESULTS.

The Result of Johansson co integrating equation indicated two co- integrating vector proving existence of long run relationships among the variables. Normalized co-integrating coefficients and the upper chamber of the VECM as stated below showed nature of the long run association in the variables:

$$RGDP = 3.40 - 6.26EXD - 0.13DMD - 4.13DPS.$$

Where RGDP is the dependent variable, 3.40 is the constant term, -6.26 stands for EXD coefficient, -0.13 stand for DMD coefficient, while -4.13 stands for DPS coefficient.

Coefficient estimates of the variables, EXD, DMD and DPS bore negative signs showing negative long run relationship with RGDP. This result is in agreement with Obademi and Okubanjo (2013) & Adofu and Abula (2010) which reported a long run association amid national output, external debt and internal debt. The variables; EXD and DMD did not meet the apriori expectation in the long run as it is expected based on Keynesian economic theory, which stated that as external debt, domestic debt and domestic private savings increase, economic growth should also rise. In the short run external debt (EXD) and domestic debt (DMD) have significant negative relationship with economic growth (Proxy with RGDP). This result also did not meet apriori expectation of the Keynesian economic theory in the short run. The failure of the variables to meet the apriori expectation may be attributed to diversion of borrowed fund from the purpose of which it is borrowed to private purse making the impact of the borrowed money not to be seen in the economy.

From the causality result, both external and domestic debt correlates with economic growth. The result implies that an increase in foreign debt and internal debt (external and domestic) leads to increase in economic growth. This means that if money borrowed are properly invested and utilized, it will surely spur the growth of the economy.

6.1 Summary of Finding

This study empirically analyzed association amid public debt and national output in Nigeria 1980-2015. The study specified Real Gross Domestic Product which is proxy for national output as a

function of foreign debt, Domestic debt and Domestic Private Savings. The following statistical and econometric tests were applied: stationarity test, co integration test, and VECM test. Results of this study indicate as follow.

- (i) Foreign debt has significant negative impact on national output in both the long run and short run within period under study.
- (ii) Domestic debt (DMD) has significant negative relationship with national output in the long run and also in the short run within the period under consideration.
- (iii) There is causal relationship existing amid explanatory variables and national output in Nigeria.
- (iv)

6.2 RECOMMENDATIONS

Based on findings, the study recommends that (i) government should ensure that the money borrowed both external and domestic should enter the system by making sure that the money borrowed are put into productive investment such as power sector, agricultural sector and manufacturing sector etc, so that it will lead to increase economic growth. (ii) The government ought to develop a framework for recording and monitoring all money borrowed and as well as formulates and implements a policy for management of all money borrowed in order to ensure accountability and avoid corruption.

6.3 CONCLUSION

This study empirically analyzed the relationship amid public debt and national output in Nigeria from 1980-2015. The following are specific objectives of the study (i) Investigate extent to which foreign debt impact national output in Nigeria. (ii) Ascertain if domestic debt significantly impact national output in Nigeria. (iii) Determine degree of causal association existing amid explanatory variables and national output in Nigeria. This research work applied these following statistical and econometric tests: stationarity test, co integration test, and VECM test. Results of this study indicate as follow. (i) Foreign debt has significant negative impact on national output in both the long run and short run within period under study. (ii) Domestic debt (DMD) has significant negative relationship with national output in the long run and also in the short run within period under consideration. (iii) There is causal association existing amid the explanatory variables and national output in Nigeria. Based on findings, the study recommends that (i) government should ensure that the money borrowed both external and domestic should enter the system by making sure that the money borrowed are put into productive investment such as power sector, agricultural sector and manufacturing sector etc, so that it will lead to increase economic growth. (ii) The government ought to develop a framework for recording and monitoring all money borrowed and as well as formulates and implements a policy for management of all money borrowed in order to ensure accountability and avoid corruption.

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