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Debt Management and Economic Growth Empirical Evidence from Nigeria

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Abstract:

This study evolved out of the need to offer an in-depth understanding of the economics of debt in Nigeria. The study aims at analyzing the effectiveness of external debt on economic growth within a span of 1981-2012. The broad objective of this work is specified to evaluate the impact of external debt stock and debt servicing on economic growth. In all, the models were to show the growth relationship between the independent variables-inflation rate, exchange rate, interest rate, government expenditure, external debt stock and external debt service and the dependent variable-gross domestic product (GDP). The data were collected from CBN Statistical Bulletin 2010 and the Debt Management Office (DMO) quarterly report. The Engle & Grenger Co-integration and Ordinary Least Square (OLS) were employed in the cause of this study. The Augmented Dickey Fuller test (ADF) shows that the variables are stationary and reliable for forecasting. The choice of OLS is most appropriate for the study in terms of goodness of fit and significance of regression coefficients. The result of the analyses showed that rising external debt stock inhibits the pace of economic growth of Nigeria by increasing the cost of its servicing beyond the debt sustainability limit while external debt servicing was found not to impair economic growth. Summary and policy recommendations were presented in line with our stated objectives and facts then conclusions were made. It was found that external debt stock rises rapidly due to accrued compound interest and loans were secured for dubious projects. Part of the policy recommendations were that Nigeria should increase its export base by investing borrowed funds in productive ventures and she should also seek fixed interest payment, varying amortization schemes and multi-year rescheduling.

1. Introduction

Debt management is any strategy that helps a debtor to repay or otherwise handle their better. Debt management may involve working with creditors to restructure debt or helping the debtor manage payments more effectively. A debtor may appeal to a debt management company or special unit as in government to handle issues of debt management.

Debt management, by the standard financial definition, involves a designated third party assisting a debtor to repay his or her debt. Many companies specializing in credit counseling offer plans to help people with heavy debt and damaged credit get their financial situation under control. A simple definition could be the routine practice of spending less than one earns. For all intents and purposes, however, it is a structured repayment plan set up by a designated order or as a result of personal initiation.

A plan to manage debt entails a series of steps, which the third party service works on with the help of the debtor. The first step typically involves compiling a list of all creditor and the amounts owed to each. Some creditor are not eligible to be include in a debt management plan, and typically, secured debt such as car loan and home loans are not included.

Debt management refers to how debt is administered or handled so as to avert/avoid adverse economic effects. Debt management is about the debt policy designed to achieve certain objectives and actual' implementation of this policy (Nnamocha, 2002). Traditionally, debt management consists of raising the necessary debt at the cheapest possible interest rate cost, and paying such interest with ease in the earliest possible time.

There are objectives of debt management. Debt management now belongs to monetary policy as part of general macro-economic policy of the state administered by the monetary authorities. Other objective of management of debt is to keep the interest rate cost as low as possible. There is also need to ensure that other macro-economic objective of the government, like stabilization at economic growth etc.

However, generally is expected that developing countries, facing a scarcity of capital, will acquired external debt to supplement domestic saving (Malik *et al.*, Aluko and Arowolo, 2010) Besides, external borrowing is preferable to domestic debt because the interest rate charged by international financial institutions like International Monetary Funds (IMF) is about half to the one charged in the domestic Market (Pascal, 2010). In any case, whether or not external debt would be beneficial to the borrowing nation depends on whether the borrowed money is used in the productive segments of the economy or consumption. Adepaju *et al.*, (2007), stated that

debt financial investment need to be productive and well managed enough to earn a rate at return higher than the cost of debt servicing.

The main lesson of the standard “growth with debt” literature is that a country should borrow abroad as long as the capital thus acquired produces a rate of return that is higher than the cost of borrowing country is increasing its capacity and expanding output with the aid of foreign savings. The debt, it property utilized is (Hameed *et al.*, 2008) by producing a multiplier adequate infrastructure base, a larger export terms of trade. But this has never been the African countries (SSA) where it has been misused (Aluko and Arowolo, 2010). Apart from the fact that external debt had been badly expended in these countries, the management is usually in foreign exchange has also affected their macro-economic performance (Aluko and Arowolo, 2010; Seweux and Yiagadesen 2001).

Prior to the 8 billion debt cancellation granted to Nigeria in 2005 by the Paris club. The county had externs’ debt of close to 40 billion with over 30 billion of the amount being owed to Paris Club alone (Semencatrious, 2005a). the history at Nigeria huge debts can hardly be separated from its decades of misrule and the continued recklessness of its rulers’ Nigeria’s debt stock in 1971 was 8 billion (Semenitaw, 2005a). By 1991, it had risen to \$33.4 billion and rather than decrease, it has been on the increasing particularly with the insurmountable regime of debt servicing and the insatiable desire of political leaders to obtain loan for the execution of dubious projects.

Before the debt cancellation deal, Nigeria was to pay a whopping sum of \$4.9 billion every year on debt servicing (Aluko and Arowolo, 2010). It would have been impossible to achieve exchange rate stability or any meaningful growth under such indebtedness. The effect of the Paris Club debt cancellation was immediately observed in the sequential reduction of the exchange rate of Nigeria via-s-vis the dollar from 130.6 naira in 2005 to 128.2 naira in 2006, and then 120.9 in 2007 (CBN, 2009). Although, the growth rate of the economy has been inconsistent in the post-debt relief period as it plunged from 6.5% in 2005 to 6% in 2006 and then increased to 6.5% in 2007 (CBN, 2008) it could have been worse if the debt had been cancelled.

The expected benefit of debt cancellation was wiped off by the global crisis of 2009 which precipitated on August 2007 by the collapse of the sub-prime lending market in the United States. The effect of the crisis on Nigeria’s exchange rate was phenomenal as the naira exchange rate to the dollar rose astronomically from about N120/\$ as the last quarter of 2007 to more than N150/\$.

This is attributable to the drop in foreign earning of Nigeria as a result of the persistent fall of crude oil prices.

Available statistics show that the external debt stock of Nigeria has been on the increase from 83.545 million in 2006 to 83.654 million in 2007 and then to 83.720 million and 83,947 million in 2008 and 2009 respectively (CBN, 2009).

Though management of national debt has to do with both the external and domestic debts of a country. This paper will concentrate more with external debt management investigating its effects on economic growth and also to, evaluate the impact of external debt servicing has on the economic growth of Nigeria and also to investigate its implication on the national foreign reserves.

1.1. Statement of the Problem

The huge amount of debt stock and debt service payments of sub-saharan African countries and Nigeria in particular has prevented the countries from embarking on larger volume of domestic investment, which would have enhanced growth and development (Clement *et al.*, 2003). External debt became a burden to most African countries because contracted loans were not optimally deployed therefore returns on investments were not adequate to meet maturing obligations and did not leave a favourable balance to support domestic economic growth. Therefore African economies have not performed well because the necessary macro-economic adjustment has remained elusive for most of the countries in the continent. The main interest of this paper then is to empirically investigate the economic growth in Nigeria and the effect of debt management.

1.2. Objectives of the Study

The main objective of this study is to examine best management of debt management and its effects on the Nigeria economic growth. Other specific objectives include:-

- To empirically investigate the effect of external debt service payment on economic growth of Nigeria.
- To determine the effect of debt service payment on economic growth of Nigeria.
- To determine the effect of debt payment on Nigeria foreign reserve.

1.3. Statement of Hypothesis

The following hypothesis were formulated and tested in the course of this study.

1.3.1. HYPOTHESIS I

- H_0 : The external debt stock does not have impact on the economic growth of Nigeria.
- H_0 : That the external debt stock does not have impact on the economic growth of Nigeria.

1.3.2. HYPOTHESIS II

- H_0 : That the external debt service payment does not have an impact on economic growth in Nigeria.

1.3.3. HYPOTHESIS III

- H_0 : That the debt service payment does not have an impact on the Nigeria external foreign reserves.

1.4. Significance of the Study

This work is focused on providing alternative measures in handling debt management issues in Nigeria. It will also serve as a tool to reshape government policies towards loan procurement and debt servicing in Nigeria. This work may also serve as a yardstick for further research and documentation on Nigeria debt issues.

1.5. Scope and Limitation of the Study

The scope of this work shall cover the debt trend of Nigerian over the years. The general overview of the debt cancellation shall be taken with certain issues raised and discussed. However, the empirical investigation of debt management and economic growth of Nigeria shall be restricted to 1981 to 2012. This restriction is unavoidable because of the non-availability of data.

2. Review of Related Literature

The review of related literature provides the foundation upon which the whole study was based upon. According to Abdullah and Levine quoted in Baridan (1993), the subject matter debt management and economic growth in Nigeria has enjoyed considerable attention in both theoretical and empirical literature. Generally these research efforts were targeted at discovering how debt management affects Nigeria economic growth on one hand and how this understanding could shape better debt management policies in Nigeria. This section of the work attempts to examine the contribution of theorists and empiricists by looking at the following loading.

- 1) Theoretical framework
- 2) Nigeria debt problem
- 3) Debt management office
- 4) External debt management in Nigeria
- 5) Impact of external debt on Economic growth
- 6) Limitations of Previous Studies

2.1. Theoretical Framework

Nigeria is characterized by inadequate internal capital formation arising from the vicious circle of low productivity, low income and low savings. This scenario calls for technical, managerial and financial support from abroad to bridge there resources gap. The accesses to external finance strongly influence the economic development process of nitrous. It is an important resource needed to support sustainable economic growth.

Ordinarily, economic growth should depend largely on domestic capital formation and accumulation but due to severe limitations it requires imports or capital goals and complementary raw materials that are domestically available. These foreign imports are necessary for various reasons. Balanced growth calls for substantial investment in infrastructures – roads, ports, dams, transportations, and so on. Foreign debt is needed to cover two types of gaps in the developing nations' they include:

- i) The foreign exchange gap which is the payment of deficit a country faces when it has reduced it has external reserves to a minimum compared with projected import requirements.
- ii) The investment in saving gap which is the foreign capital market needed to supplement domestic savings for financing real investment levels. External financial supports, when used productivity accelerates the pace of economic development. It will not only provide foreign capital but will also give management know-how technology, technical expertise as well as access to foreign markets for the mobilization of a nation human and material resources for development purposes.

Specifically, loans can be used in areas such increasing agricultural production of goods for export, mineral exploration, industrialization, transport and communication, rural and urban development, health care services, balance of payment, tourism, infrastructural development etc (Anyanwu *et al.*, 1992).

2.2. Nigeria Debt Problem

For many years there has been little agreement over the exact scale and composition of Nigeria external debt stock. The origin of Nigeria's external debt dates back to 1958, when a sum of US\$28 million was contracted for railway construction. Between 1958 and 1977, the resort to foreign debt was minimal, as debts contracted during the period were the concessional debts from bilateral and multi-lateral sources with longer repayment periods and lower interest rates. From 1978, following the collapse of oil prices, which exerted considerable pressure on government finances, Nigeria was unable to shift gears in the face of changing economic fortunes and adopted a policy of deficit financing. It became necessary to borrow for balance of payments support and project financing.

In 1978, the first "jumbo loan" of US\$ 1 billion from the international capital market, increased the nation's debt profile to US\$2.2 billion (AFRODRD, 2007). Given this, Nigeria's external debts skyrocketed from the million-dollar category to that of billion dollars. Nigeria's external debt stock increased to US\$13.1 billion in 1982 (CBN, 2003). Two factors led to this sharp increase. One, the entrance of state governments into external loan obligation and two, there was a substantial decline in the share of loans from bilateral and multilateral creditors and a consequent increase in borrowing from private sources at stiffer rates Nigeria's inability to settle her import bills resulted in the accumulation of trade arrears amounting to US\$9.8 billion 1983 and 1988. The insured components were US\$2.4 billion while the insured were US\$7.4 billion (Adepoju *et al.*, 2007). The insured component was rescheduled at the Paris Club, while the uninsured was reconciled with the London club.

This reconciliation which took place between 1984 and 1988 reduced the amount to US\$ 3.8 billion (Adepoju *et al.*, 2007). The accrued interest of US\$1.0 billion was recapitalized. This brought the amount to US\$4.8 billion in 1988 and the debt was eventually refinanced. In 1990, Nigeria's external debt rose again to US\$ 33.1 billion (CBN, 2003). After a brief decline to US\$27.5 billion in 1991, it rose steadily to US\$32.6 billion at the end of 1995. As at 1999, Nigeria's external debt stock was US\$28.0 billion, 73.2 per cent of this was owed to the Paris Club while the rest was owed to the London Club, the multilateral creditors, promissory note holder and others (CBN, 2003).

Furthermore, servicing and rescheduling of debt became problematic for Nigeria from around 1985 when its external debt rose to up to US\$19 billion. Before then, Nigeria had experienced boom in oil revenue which was followed immediately by an unexpected decline. In 1980, Nigeria earned \$25 billion from oil export. In 1982, it declined to \$12 billion and further to \$6 billion in 1986 (CBN, 2003). Government spending had remained high within this period and much of the projects were financed through external borrowing. Since Nigeria was an OPEC member, it was not qualified for the soft loan financing provided by multilateral and bilateral aid agencies to other countries at that time. As at the end of 2004, Nigeria's debt stock had reached almost \$36 billion out of which \$31 billion was owed to the Paris club of creditors while the rest was owed to multilateral, commercial and other non-Paris Club of creditor (Riefel, 2005).

According to AFRODAD (2007) debt service payment for Nigeria debts started on a soft, tolerable level in 1958 until it became a hard bargain year later. Matter came to a head in 2003 when one Nigeria's creditor, the Paris Club, demand \$3 billion annually for debt service payment. Dr. Ngozi Okongu-Iweala considered the payment economically unsustainable (Semenitari, 2005). She therefore negotiated with the club. The \$18 billion debt cancellation for Nigeria in 2005 by the Paris and subsequent settlement at some outstanding debts reduced the total external debt of the country substantially.

2.3. Debt Management Office

Debt Management Office was established 4th October to centrally coordinate the management of Nigeria's debt. It maintains reliable debt data and ensures effective management of Nigeria's debt. It coordinates the management of Nigeria's debt both internationally and locally which way hitherto was being done by a myriad of establishments in an uncoordinated fashion. This diffused debt management strategy led to inefficiency. For instance, in the FMF alone, four different departments have functions for the management of external debt in the following format:

1. External Finance Department: Responsible for all Paris club debts and for the management of public debt statistics
2. Multilateral institutions: Department: responsible for relationship with all multilateral institutions (excluding the African Development Bank and its subsidiaries such as ADF and the NTF, which is handled by the ABER department) it is also responsible for managing and servicing multilateral debt.
3. African and Bilateral Economic Relation (ABER) responsible for liaising with the ADB and its subsidiaries, ECOWAS, and all non-Paris Club bilateral creditors.
4. Foreign exchange and trade relations department: responsible for issuing reconfirmation for payment externalization to CBM and for documenting repayment and servicing of external debts.

In the CBN, the following departments and some involvement with external debt management:

- a) Debt management department: responsible for the London Club debts consisting of trade debts, par bonds, and promising notes:
- b) Debt conversion committee: responsible for managing various debt conversion options such as debt-for-debt, debt-for-equity, debt-for export, debt-for-nature and debt-for-development and
- c) Various departments: responsible for processing and effecting loan repayment on behalf of all the other agencies or departments of government listed above.

This diffusion in the management of public debt created fundamental problems, including the following operational inefficiency and poor coordination.

- a) Inadequate debt data recording system and poor information flow across agencies with consequent inaccurate and incomplete debt records.
- b) Extreme difficulty in the verification of creditors' claims due to conflicting figure from the various bodies handling the debt management function.
- c) Complicated and inefficient debt service arrangements which credited protracted payment procedure and often led to penalties that added to the nation's debt stock.
- d) Lack of consistent well-defined borrowing policies and debt management strategies.

The consideration of these myriad problems led government to support of establishment of autonomous DMO. To achieve the following:

- a) Good debt management practices that make positive impact on economic growth and national development, debt servicing in a manner that saves resources for investment in poverty reduction programmes.
- b) Prudently raising financing to fund government deficits at affordable costs and manageable risks in the medium and long term.
- c) Achieving positive impact on overall macro-economic management, including monetary and fiscal policies.
- d) Improving the nation's borrowing capacity and its ability to manage debt efficiently in promoting economic growth and national development.

- e) Projecting and promoting a good image of Nigeria as a disciplined and organized nation, capable of managing its assets and liabilities.

2.4. Debt Management Strategies

Before now, the management of public debts is the major responsibility of the Central Bank of Nigeria and the Federal Ministry of Finance. However, since the establishment of department of debt management (DMO); DMO has the mandate to manage the Nigeria debts. Strategies adopted in managing debt include and not limited to the following.

2.4.1. Debt Rescheduling

This involves the rearrangement of terms of debt like the adjustment of interest rate grade period, principal repayment and maturity, importantly, the strategy does not cause any reduction in the stock debts rather it facilitates management of debt by providing relief. For instance, Nigeria negotiated services of rescheduling arrangement with the Paris Club of creditor between 1986 and 1991 to which more than half of external debt is owed.

2.4.2. Debt Equity Conversion

The Nigeria government is currently applying debt equity swap, i.e. converting foreign debts into equity in local companies. Under this system there are some advantages that could be obtained in one hand and loss on the foreign investments. It also reduces the outstanding debt stock—the fear of foreign domination in terms of ownership of assets may be counterproductive.

2.4.3. Ban on External Borrowing

This is just a temporary measure to stop the government from further borrowing particularly for period of time.

2.4.4. Debt Repudiation

This involves disowning the debt completely. Many economists had advocated this. According to Fidel Castro, there is no sense in a developing country like Nigeria paying its debts owing especially foreign debt because through colonization. African countries had more than paid for debts. This could lead to sanction from International Monetary Fund (IMF) and World Bank. If Nigeria should repudiate.

2.4.5. Debt Forgiveness

This arises when the creditor nation decides to forget or write off the debt. Paris CLUB has taken this option in favour of some debtors in the past. Recently, the club agreed to write off \$30 billion being owed by Nigeria. This is based on the agreement that the country will pay the remaining \$12.4 billion between 2005 and the quarter of 2006.

2.4.6. Opinions on External Debt Management of Nigeria

The establishment of Debt Management Office (DMO) to consolidate the debt management function in a single agency, to ensure proper coordination of the country's debt recording and management activities, including debt service forecast, debt service repayment and advising on debt negotiation as well as new borrowings.

According to Owasonye (2005), the establishment of debt management office (DMO) is regarded in contemporary times as a best practice in view of the importance of external debt management to development. He maintained that a new approach to debt management is needed. This will ensure that borrowing is resorted to only when necessary and excessive borrowing should be avoided, the legislature should wake up to its duty to set the expenditure limits in collaboration with the executive, something similar to what obtains in US a debt ceiling is set for government by the congress. It should also insist that all requests regarding borrowing are accompanied with a cost benefit analysis.

Muoghale *et al.*, (2007) investigated how and the extent to which investment burden of international oil prices movement using two different methods, namely; the OLS and Exact Maximum Likelihood (EML) technique. They found that a positive association exists between external debt and investment burden. They therefore concluded that it is well not be an appropriate policy for a developing economy such as Nigeria to lavishly encourage both investment participation (and associated remittance) and increased accumulation of external debt (and attendant burden). They recommended that policy makers must have to strike a balance between the two and determine the optimal level and timing of both activities in order not to unnecessarily increase the overall external sector burdens.

According to Yicaw and Ozem (2008) external debt sustainability in a country's ability to meet its foreign debt obligation. Ajayi (1991), after analyzing the external debt of Nigeria within a general macro-economic framework, found that the country had macro-economic policies that led to that accumulation of debt in excess performance. He found out that the entire period between 1970 and 1988, macro-economic policy coupled with inadequate trade policy led to a rate of borrowing that not sustainable in Nigeria.

Adepoju *et al.*, (2007) further noted that a huge external debt without servicing as it was the case for Nigeria before the year 2000 constituted a major impediment to the revitalization of her shattered economy as well as the alleviation of debilitating poverty.

Clement's *et al.*, (2003) argued that debt affects growth via its effect on the efficiency of resource use, rather than through its depressing effect on private investment. It was also found that the stock of public debt does not appear to depress public investment as debt service does.

YEAR	EXTERNAL DEBT	INTERNAL DEBT	TOTAL DEBT
1986	41,452.4	28,440.0	69,892.4
1982	100,789.1	36,790.6	137,579.7
1988	133,956.3	47,031.1	180,987.4
1989	240,393.7	47,051.1	287,444.8
1990	298,614.4	84,124.6	382,739.0
1991	328,054.0	116,900.2	444,954.2
1992	544,264.1	161,900.2	706,164.3
1993	633,144.4	261,092.6	894,237.0
1994	648,813.0	259,360.9	908,173.9
1995	716,865.6	259,360.9	976,226.5
1996	617,320.0	343,674.1	960,994.1
1997	595,931.9	359,029.1	954,961.0
1998	633,017.0	537,409.9	1,170,426.9
1999	2,577,383.4	794,806.3	3,372,189.7
2000	3,097,393.4	898,253.9	3,995,647.3
2001	3,176,291.0	1,016,974.0	4,193,265.0
2002	3,780,208.9	116,600.7	3,896,809.6
2003	4,478,329.3	1,329,680.0	5,808,009.3
2004	4,890,269.6	1,370,325.1	6,260,594.7
2005	2,695,072.2	1,525,906.0	4,220,978.2
2006	451,461.7	2,725,949.0	3,177,410.7
2007	431,079.9	4,127,973.5	4,559,053.4
2008	523,254.1	2,320,307.2	2,843,561.3
2009	590,437.13	3,228,029.0	3,818,466.2
2010	689,849.5	4,551,820.0	5,241,669.5
2011	896,849.6	5,622,840.0	6,519,689.6
2012	1,026,903.9	6,537,536.3	7,564,440.2

Table 1: Migare Debt Profile (\$ Million)

Source: CBN Statistics Bulletin (2012)

2.5. Assessment of External Debt on Economic Growth

Researchers have attempted to empirically assess the external debt economic growth like the debt overhang and growing out effects—mainly by using ordinary least square (OLS). Most of the empirical studies include a fairly standard set of domestic debt policy and other exogenous explanatory variables. The majority find one or more debt variable to be significantly and negatively correlated with investment or goods (depending on the focus of the study).

Hamebed *et al.*, (2008) opined that the much of external debt could dampen growth by hampering investment and productivity growth because of the fact that when greater percentage of reserves (foreign currency) are consumed in meeting debt service exchange rate fall and creditors' confidence erodes causing reduction in access to external financial resource.

Boyce and Ndikumanu (2002) noted that the inability of many SSA countries to meet their social needs and escape from debt is, to a large extent, a result of the fact that the borrowed funds have not been used productively, instead of financing domestic investment or

consumption, a substantial fraction of the borrowed funds was captured by African political elites and channeled abroad in the form of capital flight, the revealed.

Were (2001) noted that sub Sahara Africa countries were plagued by their heavy external debt burden. He argued that the crisis, compounded by massive poverty and structural weaknesses of most of the economies of these countries made the attainment of rapid and sustainable growth and development difficult. It then became widely accepted that the heavily indebted countries require debt of relief initiatives beyond mere rescheduling to have a tune-around in their economic performance and fight against poverty.

Sun (2004) opined that completion point countries will continue to face a dilemma given their large priority financing needs for development on the one hand and the need to maintain long term debt sustainability on the other. To achieve debt sustainability, he advised that they should maintain macro-economic stability and deepen reforms to improve policy and institutional framework, strengthen debt management, mobilize domestic revenue and create an environment conducive to attracting foreign direct investment and diversifying export. He concluded that the mix between debt and grant financing must be closely monitored by both borrowers and creditors to ensure that the potentially large financing needs associated with meeting the Millennium Development Goals of do not give rise to a renewed excessive building of debt.

Ngassaim (2000) argued that debt obligation can be eased temporarily by rescheduling. He noted that African countries that are undergoing external debt crisis may improve their situations by liberalizing their economies in order to bring competitive pressured on domestic private business activities, adjusting the exchange rate so that, exports are encouraged and imports are restricted and reducing inflation through stronger policies of fiscal and monetary adjustment. He concluded that because of the structural difficulties facing most African countries, a comprehensive policy for managing external debt has to aim at addressing not only demand management issues but also the structural problems.

2.6. Limitations of Previous Studies

The shortcomings of ember studies in this field include lack of clarity at literature and statistical problems such as biasness, inconsistency, incorrect and unreliable data.

However, this work will not be distorted as the researcher is systematic in approach towards this study. This work is therefore suited to be compelling to the reader, user-friendly, direct, comprehensive and simple. Also another limitation of previous studies is the rigidity of focus on external debt without further disintegration of the concept into external debt stock and external debt service payment and foreign reservoirs. This save to fill this gap by scrutinizing both concepts and to bring period to date.

3. Research Methodology

The choice of model for this researches in the ordinary least squares because it provides satisfactory results for estimates of structural parameters (Koutsoylanmis 1977:43). This method involves decision on whether the parameter art statistically significant and theoretically meaningful. It also verifies the validity of estimates and whether they actually represent economic theory. In order to achieve a comprehensive analysis, the three major components of external debt management: external debt stock, debt service payment and foreign reservoir were employed. The real Gross Domestic product was used in the regression analysis because it is to some free of the effect of inflation.

3.1. Models Specification

The models to investigate the impact of external debt on the economic growth of Nigeria are stated below with the dependent variable as real Gross Domestic Product while the explanatory variables are External debt stock, inflation rate exchange rate, external debt service payment, government expenditure, interest rate and foreign reservoir.

- Model I

$$\text{Loggdp} = a_0 + a_1 \text{EXD} + a_2 \text{INF} + a_3 \text{EXR} + e$$

Where:

Loggdp = Gross Domestic Product

EXD – External debt stock

INF – Inflation

EXR – Exchange rate

$A_0, a_1, a_2,$ and a_3 – parameters

e – error term

- Model II

$$\text{Loggdp} = b_0 + b_1 \text{EDS} + b_2 \text{GEX} + b_3 \text{INT} + e$$

Where:

Loggdp – Real Gross Domestic Product

EDS – External debt service payment

GEX – Government expenditure

INT – Average interest rate

B_0, b_1, b_2 and b_3 – Parameters

e – Error term

- Model III

$$\text{Loggdp} = C_0 + C_1 \text{EDS} + C_2 \text{GEX} + C_3 \text{EXR} + e$$

3.2. Data Analysis Technique

The method of data analysis to be used in this study is the ordinary least square method (OLS). This approach which is quantitative technique, includes table and the test for the hypothesis formulated by using the Augmented Dickey Fuller Test (Unit Root) Error Co-integration model (ECM) and Regression analysis at 5% level of significance.

3.2.1. Aprior Expectation

➤ Economic Criteria

The economic apriori test shall be conducted to enable us examine the magnitude and size of the parameters estimate. This evaluation is guided by economic theory to ascertain if the parameter estimate conforms to expectation.

• Model I

$$\text{GDP} = a_0 + a_1 \text{EXD} + a_2 \text{INF} + a_3 \text{EXR}$$

• Where:

$a_0, a_1, a_2,$ and a_3 are parameters

$$A_0 = 0, a_1 < 0, a_2 < 0 \text{ and } a_3 > 0$$

• Model II

$$\text{GDP} = b_0 + b_1 \text{EDS} + b_2 \text{GEX} + b_3 \text{INT} + e$$

• Where

b_0, b_1, b_2 and b_3 are parameters

$$B_0 > 0, b_1 < 0, b_2 > 0 \text{ and } b_3 < 0$$

3.2.2. The Unit Root Test (Augmented Dickney Fuller Statistics Test)

The Augmented Dickney-Fuller (ADF) statistic, used in the test, as a negative number, we consider the ADF in absolute terms. The essence of Unit Root is to check if the variables are stationary (if they do not change over a period of time) and reliable for forecasting. If all variable are of the same order, we run a co-integration test. The result of the ADF shows if the variable is stationary or not.

$H_0: \theta = 0, \text{ ai} = I$ (presence of unit root, the data non-stationary)

$H_1: \theta < 0, \text{ ai} \neq I$ (the data is stationary and does not need to be differenced).

If the ADF test statistics value is greater than the critical value in absolute terms at 5% level of significance, we reject H_0 and accept H_1 . This means there is no unit root and the data is stationary.

3.2.3. Statistical Test (First Order)

Under the statistical test, we will test for the goodness of fit, the individual significance of each regressor using the t-test and finally the significance of the regression models using the t-test.

i) Goodness of fit test:

We shall make use of the coefficient of multiple determinations R^2 to find how the variations in the explanatory variable affect the dependent variable.

ii) Student's t-test test:

It is used for testing the significance of each variable. We shall make use of 5% level of significance with (n-k) degrees of freedom and where necessary, the probability value will be used as rule of thumb.

iii) The f-test:

It will be used for testing the overall significance of the regression models. In orders words, it will be used to test the joint impact of the independent variables on the dependent variable.

3.2.4. Econometric (second order) test

Econometric test will be used for empirical verification of the model. This will range from testing for autocorrelation, normality and heteroscedasticity.

i) Autocorrelation:

The classical linear regression model assumes that autocorrelation does not exist among the disturbance terms. In order to find out where the error terms are correlated in the regression, we will use the Durbin Watson Statistics.

• Durbin Watson's Statistics

This is used to test for the presence of serial autocorrelation. This means that the serial dependence of successive error terms in the regression.

ii) Normality Test:

This test will be conducted to find out if the error terms are normally distributed with zero mean and constant variance. This is one of the assumptions of the classical linear regression model. The Jargue Bera test will be used to test the normality in the time series variable used.

iii) Heteroscedasticity Test:

Heteroscedasticity occurs when the variance of the error is not constant.

3.3. Sources of Data

Secondary data shall be the basis of data to be used for this work. It is mainly from the publication of Central Bank of Nigeria (CBN) such as CBN statistical Bulletin and CBN Annual Reports and statement of Accounts, as well as the publication of debt management office (DMO) and National Bureau of Statistics (NBS).

4. Data Presentation and Analysis

4.1. Unit Root Test Results

Variable	ADF Statistic at Level	Critical Value at 10%	ADF Statistic at 1st Difference	Critical Value at 10%	ADF Statistic at 2nd Difference	Critical Value at 10%	Order of Integration
RGDP	-2.69997	-3.2138	-6.00511	-3.2169	-7.71548	-3.2203	I(1), I(2)
EXD	-2.45056	-3.2138	-3.81947	-3.2169	-5.63125	-3.2203	I(1), I(2)
INF	-3.9539	-3.2138	-5.74087	-3.2169	-6.67543	-3.2203	I(1), I(2)
EXR	-2.33216	-3.2138	-3.70782	-3.2169	-6.35882	-3.2203	I(1), I(2)

Table 1: MODEL I

Source: Author's Computation, 2014

Variable	ADF Statistic at Level	Critical Value at 10%	ADF Statistic at 1st Difference	Critical Value at 10%	ADF Statistic at 2nd Difference	Critical Value at 10%	Order of Integration
RGDP	-2.69997	-3.2138	-6.00511	-3.2169	-7.71548	-3.2203	I(1), I(2)
EDS	-3.87233	-3.2138	-6.77292	-3.2169	-8.83253	-3.2203	I(1), I(2)
GEX	-2.9711	-3.2138	-3.00052	-3.2169	-5.12355	-3.2203	I(1), I(2)
INT	-2.36213	-3.2138	-6.41849	-3.2169	-10.5909	-3.2203	I(1), I(2)

Table 2: MODEL II

Source: Author's Computation, 2014

Variable	ADF Statistic at Level	Critical Value at 10%	ADF Statistic at 1st Difference	Critical Value at 10%	ADF Statistic at 2nd Difference	Critical Value at 10%	Order of Integration
RGDP	-2.69997	-3.2138	-6.00511	-3.2169	-7.71548	-3.2203	I(1), I(2)
EDS	-3.87233	-3.2138	-6.77292	-3.2169	-8.83253	-3.2203	I(1), I(2)
GEX	-2.9711	-3.2138	-3.00052	-3.2169	-5.12355	-3.2203	I(1), I(2)
RES	-0.33935	-3.2138	-0.54357	-3.2169	1.184177	-3.2203	NI

Table 3: MODEL III

Source: Author's Computation, 2014

Most time series data are not stationary at levels. This implies that most Ordinary Least Square (OLS) regression that is carried out at levels may not be reliable. Based on this testing for stationary of variable to obtain a more reliable result become a necessity. The Augmented Dickey-Fuller root test was employed at level, first difference and second difference.

Before testing for co-integration, researchers conducted unit root test on the variables under study to establish the stationary properties of the data. Augmented Dickey-Fuller tests were employed on each of the time series variable in the three models (Gujarati, 2004).

The results of the unit root test revealed that the series were non stationary, except for external reserve. Since all the variable were stationary at level and first difference as the ADF test statistics did not exceed the Mackinnon critical value, we cannot reject the null hypothesis ($\delta=0$) that there was unit root or the time series were non stationary. We proceed to the second difference and all the variables were stationary. We therefore accept the null hypothesis ($\delta=0$) that there was unit root or the time series was non stationary; as all the ADF test statistics were greater ($\delta<0$) than the Mackinnon critical values (Mbanasor and Onwusiribe, 2014).

However, the tests were performed with intercept and trend meaning that the null hypothesis walks with drift, meaning that the time series data observed a differenced stationary process. Since all the variables are not stationary in the same order there is the need for co-integration.

4.1.1. Cointegration Test Using Johansen Approach

We use the Johansen co-integration approach.

Rank	Eigen value	Trace test p-value	L max test p-value
0	0.94388	272.69 [0.0000]	89.286 [0.0000]
1	0.88893	183.40 [0.0000]	68.126 [0.0000]
2	0.78712	115.27 [0.0009]	47.958 [0.0033]
3	0.65020	67.315 [0.0761]	32.562 [0.0683]
4	0.40256	34.753 [0.4660]	15.968 [0.6737]
5	0.33099	18.785 [0.5191]	12.461 [0.5166]
6	0.17644	6.3245 [0.6615]	6.0177 [0.6170]
7	0.0098488	0.30683 [0.5796]	0.30683 [0.5796]

Log-likelihood = -2177.75 (including constant term: -2265.72)

Table 4: Cointegration Test Result
Source: Author's Computation, 2014

Two variables are said to be co-integrated if they have a long-term, or long run equilibrium, relationship between them. If two variables, dependent and an independent, are individually non-stationary but their residual (combination) is stationary, those variables are co-integrated (Gujarati, 2004).

When a linear combination of variables that are integrated at difference produces a stationary series, then the variables may need to be cointegrated (Johansen, 1995). This means that a long-run relationship may exist among them, which connotes that they may wander from one another in the short-run but in the long-run they will move together. To establish whether long-run relationship exists among the variables or not, cointegration test using Johansen's method was carried out. Using the trace likelihood ratio, the results point out that the null hypothesis of no cointegration among the variables is rejected in favour of the alternative hypothesis up to four cointegrating equations at 1%, 5% and 10% significant level. This means there are at least four integrating equations, which implies that a unique long-run relationship exists among the variables and the coefficients of estimated regression can be taken as equilibrium values.

4.1.2. Error Correction Model Using Vector Error Correction Approach

	Coefficient	Std. Error	t-ratio	p-value	
Const	-12930.2	30202.5	-0.4281	0.67338	
D_RGDP	-0.0700739	0.266719	-0.2627	0.79559	
D_EXD	-0.613928	0.175354	-3.5011	0.00239	** *
D_INF	2025.75	1227.26	1.6506	0.11525	
D_EXR	14647.3	4543.93	3.2235	0.00447	** *
D_EDS	0.296108	0.113227	2.6152	0.01702	**
D_GEX	-0.0570072	0.0546868	-1.0424	0.31029	
D_INT	-7254.2	4668.31	-1.5539	0.13670	
D_ERS	-1.30002	0.753353	-1.7256	0.10064	
EC1	-0.523361	0.0982903	-5.3246	0.00004	** *
EC2	0.133229	0.0553605	2.4066	0.02644	**

Table 5: Error Correction Estimates

Mean dependent var	22314.41		S.D. dependent var	166774.1
Sum squared resid	2.02e+11		S.E. of regression	103125.4
R-squared	0.757838		Adjusted R-squared	0.617639
Rho	-0.069480		Durbin-Watson	2.068570

Table 6

***, ** and* statistically significant at 1%, 5% and 10% respectively
Source: Author's Computation, 2014

The short run component of the estimated vector error correction model (VECM), with the restriction implied by the four cointegrating equations (CES's) imposed. Examination of the F-statistics and adjusted R2 suggest that the variables in VECM significantly explained the short run changes in the gross domestic product.

The error correction term EC (-1) and EC (-2) coefficient were significant with the absolute values of -0.5233 and 0.1333. The implication of this is that there is a convergence in the long run, as earlier revealed by the co-integration test. The coefficient indicates that the speed of adjustment from the short run to the long run is 52.33% and 13.33%. This implies that about 52.33% and 13.33% of the errors made in the previous year are corrected in the current years. This was further buttressed by the differenced lag value of the dependent variable (RGDP) with a coefficient of -0.0700. This implies that the GDP of the previous year negatively affect the current year's GDP by 7%. With respect to the general significance of the explanatory variables, the R squared implied that about 75% changes in the GDP were explained by the variation in the explanatory variables. The Durbin Watson value of 2.068 suggests the presence of no autocorrelation. In terms of the explanatory variables, the coefficient denotes elasticity with respect to individual explanatory variables.

4.1.3 Regression Results

Model 1: OLS, using observations 1981-2013 (T = 33)

Dependent variable: RGDP

	Coefficient	Std. Error	t-ratio	p-value	
Const	199652	52229.6	3.8226	0.00065	***
EXD	-0.0468303	0.0207138	-2.2608	0.03145	**
INF	-49.2941	1373.92	-0.0359	0.97163	
EXR	3541.31	482.252	7.3433	<0.00001	***

Table 7: Model 1

Mean dependent var	381440.3		S.D. dependent var	233633.6
Sum squared resid	5.15e+11		S.E. of regression	133244.1
R-squared	0.705237		Adjusted R-squared	0.674744
F(3, 29)	23.12801		P-value(F)	7.61e-08
Log-likelihood	-434.0909		Akaike criterion	876.1819
Schwarz criterion	882.1679		Hannan-Quinn	878.1960
Rho	0.132095		Durbin-Watson	1.689007

Table 8

***, ** and* statistically significant at 1%, 5% and 10% respectively

Source: Author's Computation, 2014

The OLS regression estimate for model 1 with the coefficient of multiple determinations (R^2) with the value of 0.705 indicates that the total variation in the GDP was accounted for by 70.5% of the independent variables included in the model. The F-test statistics value of 23.128 indicates that the model is statistically significant at 1 percent. External debt was significant at 5 percent and negatively related to GDP indicating that an increase in the external borrowing of Nigeria to finance projects and investment affects the economy negatively. External debt burden is the reflection of the difficulties and strains arising from the servicing of external debt. This may result from inability to generate enough resources to meet commitments in debt servicing. The burden is measured in terms of the proportion of current resources (income) devoted to financing past consumption (Ogunlana, 2005). Therefore, when a disproportionately large share of current resources is deployed to serve external debt the burden increases. The reverse is the case when external debts can be serviced without compromising the requirements of domestic economic development.

Exchange rate was significant at 1 percent and positively related to the economy. This implies that an increase in the exchange rate in results to the improvement in the economic well being of the nation. Exchange rate is significant in determining output in Nigeria. It is interesting to note that growth and real exchange rate were positively related, and the estimated coefficient was statistically significant. The result confirms what is normally expected, i.e. real exchange rate depreciation associated with an increase in growth (Akpan & Atan, 2013).

	Coefficient	Std. Error	t-ratio	p-value	
Const	168654	77151.7	2.1860	0.03704	**
EDS	0.0946921	0.0971978	0.9742	0.33800	
GEX	0.143327	0.0178076	8.0487	<0.00001	***
INT	3766.58	3910.82	0.9631	0.34345	

Table 9: Model 2: OLS, using observations 1981-2013 (T = 33)

Dependent variable: RGDP

Mean dependent var	381440.3		S.D. dependent var	233633.6
Sum squared resid	4.92e+11		S.E. of regression	130244.9
R-squared	0.718357		Adjusted R-squared	0.689222
F(3, 29)	24.65575		P-value(F)	3.97e-08
Log-likelihood	-433.3396		Akaike criterion	874.6793
Schwarz criterion	880.6653		Hannan-Quinn	876.6934
Rho	0.295473		Durbin-Watson	1.119639

Table 10:

***, ** and* statistically significant at 1%, 5% and 10% respectively

Source: Author's Computation, 2014

The OLS regression estimate for model 2 with the coefficient of multiple determinations (R^2) with the value of 0.718 indicates that the total variation in the GDP was accounted for by 71.8% of the independent variables included in the model. The F-test statistics value of 24.65 indicates that the model is statistically significant at 1 percent. Government expenditure was significant at 1 percent and positively related to GDP indicating that an increase in the government expenditure of Nigeria to finance projects and investment affects the economy positively. In Olukoye (2009) the general view is that public expenditure either recurrent or capital expenditure, notably on social and economic infrastructure can be growth-enhancing.

	Coefficient	Std. Error	t-ratio	p-value	
Const	204229	19092.2	10.6970	<0.00001	***
EDS	0.094586	0.0618822	1.5285	0.13723	
ERS	1.27129	0.190398	6.6770	<0.00001	***
GEX	0.137678	0.0113556	12.1242	<0.00001	***

Table 11: Model 3: OLS, using observations 1981-2013 (T = 33)

Dependent variable: RGDP

Mean dependent var	381440.3		S.D. dependent var	233633.6
Sum squared resid	2.00e+11		S.E. of regression	83063.29
R-squared	0.885450		Adjusted R-squared	0.873600
F(3, 29)	74.72140		P-value(F)	9.44e-14
Log-likelihood	-418.4958		Akaike criterion	844.9916
Schwarz criterion	850.9776		Hannan-Quinn	847.0057
Rho	0.169076		Durbin-Watson	1.650166

Table 12:

***, ** and* statistically significant at 1%, 5% and 10% respectively

Source: Author's Computation, 2014

The OLS regression estimate for model 2 with the coefficient of multiple determination (R^2) with the value of 0.885 indicates that the total variation in the GDP was accounted for by 88.5% of the independent variables included in the model. The F-test statistics value of 74.72 indicates that the model is statistically significant at 1 percent. Government expenditure was significant at 1 percent and positively related to GDP indicating that an increase in the government expenditure of Nigeria to finance projects and investment affects the economy positively. In Olukoye (2009) the general view is that public expenditure either recurrent or capital expenditure, notably on social and economic infrastructure can be growth-enhancing.

External reserve was observed to be significant at 1% and positively affecting the economic growth of Nigeria. Foreign reserves management is the technique of optimizing a nation's external resources to meet its economic needs. In Nigeria, the Central Bank has the sole responsibility of management of foreign reserves. The components of foreign reserves include monetary gold, reserve position at the International Monetary Fund (IMF), holding of special drawing right (SDRs) and foreign exchange which are convertible currencies of other countries (CBN, 1997). Aluko (2007), observed that External reserves has, in recent times, played significant role in the Nigeria economy.

4.2. Evaluation of Result

4.2.1. Evaluation Based On Economic “A Priori” Criteria

This test is carried to ascertain if the parameter estimates conform with what economic theory states in terms of sign and magnitude. The test is summarized in the table below;

Variable	Expected Sign	Observed Sign	Conclusion
EXD	Negative	Negative	Conforms
INF	Negative	Positive	Does Not
EXR	Positive	Positive	Conforms
EDS	Negative	Positive	Does Not
GEX	Positive	Positive	Conforms
INT	Negative	Positive	Does Not
ERS	Positive	Positive	Conforms

Table 13

Source: Author's Computation, 2014

Muoghalu *et al.*, (2007) found that a positive association exists between external debt stock and investment burdens. This also conforms to the result of the “a priori” test.

4.2.2. Evaluation Based On Statistical Criteria

➤ 4.2.2.1 R-squared:

➤ R^2 (Decision Rule)

The higher the value of R^2 , the higher the percentage of variation of the dependent variable, the better the R^2 of the regression plane to the sample observation while if closer to zero, the goodness of fit becomes worse. The value of R^2 lies between 0 and 1, therefore the closer the value to 0 or 1, it becomes worse or better respectively.

In model 1, 2 and 3, the R^2 was 0.705, 0.718 and 0.885 respectively. This indicates that the independent variables explain the variation in GDP in the tune of 70.5%, 71.8% and 88.5% respectively. That is .5%, 71.8% and 88.5% of the variations in GDP is explained by the exogenous variables in model 1, 2 and 3.

4.2.3. Evaluation Based on Econometric Criteria

➤ 4.2.3.1 Test for Auto Correlation of Dnrbin Watson

➤ Decision Rule

If $D=2$, we accept that there's no autocorrelation among the variables.

If however, $0 < D < 2$, there's positive autocorrelation among the variables.

If $2 < D < 4$, there's negative autocorrelation among the variables.

The computed D (Durbin Watson) is 1.689, 1.120 and 1.650 in Model I, II and III respectively, which reveals to us that there is positive autocorrelation between the Gross Domestic Product, external debt stock, inflation, exchange rate, external debt service, external reserve government expenditure and interest rate in Nigeria.

➤ Normality Test

Test Hypothesis:

Ho: U_i = normally distributed

Hj: $U_{\#}$ normally distributed

➤ Decision Rule

Reject Ho if probability of JarqueBera, $P < 0.05$

From the result, the JarqueBera coefficient is 0.599383 and its probability is 741047 > 0.05. We cannot reject the null hypothesis because $P > 0.05$, therefore we conclude that the error term follows normal distribution. Heteroscedasticity Test Heteroscedasticity occurs when the variance of the error term is not constant. The test contains the following hypothesis:

Ho: $a_0 = a_1 = a_2 = a_3 = 0$ (Homoscedasticity), the variance is constant.

HI: $a_{\#} a_i^2 a^3 \neq 0$ (Heteroscedasticity), the variance is not constant.

Reject Ho if $P < 0.05$

From the test result, $P = 0.012366 < 0.05$, we reject Ho and conclude that the variance is not constant.

4.3. Evaluation of Research Hypothesis

From the results and analysis so far, we see that external debt stock and external debt service have significant impact on GDP as is shown by t-test and their probabilities. The F-test also showed that the models are significant in explaining the variations in GDP. We

therefore reject Ho (refer to Chapter 1) and conclude that external debt stock and external debt service both have significant impact on Nigeria's economic growth.

5. Summary, Conclusion and Recommendations

5.1. Summary

The main objective of this study was to get the exact relationship between External debt and Nigeria economic growth, using the two major debt burden measures. The study considered three objectives which include to empirically investigate the effect of external debt on the economic growth of Nigeria, determine the impact of external debt service payment on the economic growth of Nigeria and to determine the effect of debt service payment on the foreign reserve of Nigeria. This study developed three models in order to test the hypothesis and realizes the objectives of the study. In order to understand the extent of the debt burden, the study also analyzed the impact of a rising external debt stock on economic growth. The huge debt accumulation recorded in the last two decades (i.e. 1980's and 1990's) coupled with low and sometimes negative growth rates prompted the need to undertake this study. The summary results for the three models considered in this study are discussed hereunder. The first model empirically investigated the effect of external debt on the economic growth of Nigeria. The study considered some key variables such as the external debt, inflation and exchange rate. These variables were examined the impact of these variables on the economic growth of Nigeria. The result of the unit root test for this model revealed that all the variables included in this model were stationary in line with the co-integration which revealed the presence of long run relationship existing between these variables. External debt and exchange rate were significant factors affecting economic growth of Nigeria. External debt was negatively related to economic growth as revealed by the error correction model and OLS regression model while exchange rate had a positive relationship with economic growth both at the long run and short run as revealed by the error correction model and the OLS regression model.

The second model determined the impact of external debt service payment on the economic growth of Nigeria. The study considered some key variables such as the external debt services, interest rate and government expenditure. These variables were examined the impact of these variables on the economic growth of Nigeria. The result of the unit root test for this model revealed that all the variables included in this model were stationary in line with the cointegration which revealed the presence of long run relationship existing between these variables. Government expenditure was a significant factors affecting economic growth of Nigeria. Government expenditure was positively related to economic growth as revealed by the OLS regression model in the short run while it had a negative relationship with economic growth at the long run. This may be due to the economic growth will be significant initial with the increase in government expenditure, but the continuous increase in the government expenditure with culture of misappropriation inherent in Nigeria.

The third model empirically investigated the effect of debt service payment on the foreign reserve of Nigeria. The study considered some key variables such as the external debt services, external reserve and government expenditure. These variables were examined the impact of these variables on the economic growth of Nigeria. The result of the unit root test for this model revealed that all the variables included in this model were stationary except for external reserve. The co-integration which revealed the presence of long run relationship existing between these variables. External reserve and government expenditure were significant factors affecting economic growth of Nigeria. External reserve was positively related to economic growth as revealed by OLS regression model. External reserve had a positive relationship with economic growth both at the long run as revealed by the error correction model.

5.2. Conclusion

Many countries opt for external finance as a means of ensuring sustained development and against domestic borrowing. The 'dual gap' theory postulates that investment is a function of savings and that investment that requires domestic savings is not sufficient to ensure economic development, thereby necessitating complementary external goods and services. An important issue that needs investigation is whether or not external borrowing drives economic development in debtor states. The thesis of this paper is to apply some econometric approaches to investigate the presence of linear or non-linear effect of debt on economic growth in Nigeria. External debt burden is the reflection of the difficulties and strains arising from the servicing of external debt. This may result from inability to generate enough resources to meet commitments in debt servicing. Exchange rate is significant in determining output in Nigeria. It is interesting to note that growth and real exchange rate were positively related, and the estimated coefficient was statistically significant. Government expenditure was significant at 1 percent and positively related to GDP indicating that an increase in the government expenditure of Nigeria to finance projects and investment affects the economy positively. External reserve has significant influence on the economic growth of the nation with respect to debt management.

5.3. Recommendation

The following recommendations are proffered based on the findings of this study.

- i) The overreliance of the economy on the external sector should be reduced so as to ensure that any shock that affected on country should not automatically affects the country without any way out.
- ii) The Nigerian government should investigate the reasons behind the non contribution of external debt to the GDP per capita of the country with a view to unveiling the bottlenecks and correct them. The bottlenecks could be as a result of mismanagement or higher cost of borrowing.

- iii) Now that the external debt stock of the country has declined significantly due to cancellation and relief, the modalities of borrowing external debt and their application should be technically and tactically analyzed prior to accessing the debt.
- iv) External debts are meant to boost the economic growth and development of the debtor country and improve the standard of living of the citizenry. Therefore, the Nigerian government should always consider the debts as means to long run development not just for solving short run problems.
- v) External reserve Of the country should be properly managed, as the external reserve of the economy has short run and long run implication on the debt management and performance of the economy.
- vi) Proper and prudent government expenditure should be encourage to ensure the sustained long term positive impact on the economy as this will enhance the debt management and servicing capacity of the nation.

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