

The Impact of Disaggregated Components of External Debt on the Economic Development of Nigeria (1969-2011)

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Abstract

This paper examines the impact of disaggregated components of external debt on the economic development of Nigeria for the period 1969 to 2011. A least square regression analysis was carried out on a time series data, and to avert the emergence of spurious results, a unit root test was conducted. Other econometric advances of co integration, Vector Auto Regression techniques as well as granger causality tests were deployed to ascertain the order of co integration and levels of relationships. With the aid of E-view statistical package-version 7.0, robust models for estimating the impact of external debts on the economic development of Nigeria were developed. In the short run, the result shows that while multilateral and miscellaneous sources of external debt had positive significant relationships with economic development; Promissory notes maintained a significant negative relationship. In the long run only the lagged value of GDP (in the second year), taken as an independent variable was found to be positively significant. In other words, there is no significant long run relationship between external debts and the level of economic development in Nigeria. Other sources of external debt that were hitherto significant in the short run, turned out to be insignificant in the long run. It was also ascertained that there exists a causality relationship between external debts and economic development in Nigeria. While a bidirectional relationship exists between multilateral debt and economic development, it was more of a unidirectional relationship between external debts owed the London club, Paris club and other miscellaneous sources with economic development. The study therefore recommends that Nigeria should not only be more careful in taking new loans but to make sure that any one taken is channeled to productive uses. It further advised that developmental activities should be financed majorly through increased export earnings spearheaded by an export-led growth strategy, and that with serious determination and discipline on the part of the government; it is possible to make Nigeria a debt free nation!

Keywords: External debt, Economic growth Paris Club, London Club, Multilateral Club, Promissory notes, miscellaneous sources of debts, Debt Relief

1.0 Introduction

It is the objective of every sovereign nation to promote her level of economic growth and development and to improve the standard of living of its citizenry. Due to scarcity of resources and the law of comparative advantage, countries depend on one another to foster economic growth and to achieve sustainable economic development (Adepoju, Salau & Obayelu, 2007). The necessity for governments to borrow in order to finance budget deficits has led to the development of external debts (Osinubi & Olaleru, 2006; Obadan, 2004b).

By definition, external debt refers to the portion of a country's debt that was borrowed from foreign lenders including commercial banks, governments or international financial institutions (Arnone, Bandiera & Presbitero, 2005; Ajayi & Khan, 2000). External debt is one of methods through which countries finance their deficits and carry out economic projects that are capable of increasing peoples' standard of living and promoting sustainable levels of economic development. It is an important resource needed to support sustainable economic growth (Audu, 2004). These loans, including interest, must usually be paid in the currency in which the loan was made. In order to earn the needed currency, the borrowing country may sell and export goods to the lender's country (Obadan, 2004a).

With the achievement of political stability in Nigeria since 1999, a substantial level of the country's debt stock was cancelled and/or relieved in 2006. The effort of Nigerian government to negotiate for debt cancellation and relief has dropped the external debt stock by a significant proportion (Omotoye *et al*, 2006).

Although there are many studies on external debt and its impact on economic growth and development (see Ayadi, 2008; Fosu, 2007; Hunt, 2007; Clements, Bhattacharya ; Nguyen, 2003 and Salisu, 2010), most of these studies concentrated on debt servicing and the significance of accumulated interest payment / impact on the economic growth of debtor nations.. Other studies have also been carried out to investigate the application and management of debts (See Omotoye *et al*, 2006; Arikawe, 2001) but they failed to bring out clearly the implications / impact of the individual components of external debt on the economic development of Nigeria.

That is a research gap that is study is set to fill. Again, it will help to open up a new vista on post debt relief study of Nigeria.

1.2 Statement of Research Problem

A post debt relief review of Nigeria's economy indicates that she is still indebted to the multilateral club and to other miscellaneous sources of external debt. The status report as at 2011 is articulated in table 1 below:

Table 1: Nigeria external debt burden (2005-2011)

	2005(N'M)	2006(N'M)	2007(N'M)	2008(N'M)	2009(N'M)	2010(N'M)	2011(N'M)
Multilatera l club	330,654.40	332219.20	363448.79	420603.58	524208.11	635454.90	732109.26
Paris Club	2,028,580.10	-	-	-	-	-	-
London club	189,768.40	-	-	-	-	-	-
Promissory Notes	85,526.70	64,832.6	-	-	-	-	-
Others	60,542.60	54,409.9	67631.05	72576.64	66,232.97	54390.40	73723.36
Total(N'M)	2,695,072.20	451,461.70	431079.85	493180.22	590441.08	689845.30	805832.62

Source: CBN Statistical bulletin and the Debt Management Office.

In spite of her continued penchant for external loans, the Nigerian economy is still characterized by low per capita income, high unemployment rates, dwindling economies, inadequate basic amenities and poor infrastructural developments and falling growth rates of GDP; problems that externally procured funds are supposed to take care of. Paradoxically; it does not appear as if our craving for external loans is in any way commensurate to our low level of economic development. As a matter of fact, our continued dependence on external debts and consequent fiscal deficits is a major threat to the economic growth and development of our dear nation. Nigeria is ranked the third richest nation in Africa as at (2010), after South Africa and Egypt and yet, majority of her citizenry fall below the poverty line. This is amply evidenced in the stunted GDP growth rates of Nigeria as highlighted in table 2 below:

Table 2: GDP growth (Annual %) - Nigeria

Year	GDP growth (Annual %)	GDP Per capita growth (Annual %)
2005	5.4	2.8
2006	6.2	3.6
2007	6.4	3.8
2008	6.0	3.4
2009	7.0	4.4
2010	7.8	5.1
2011	6.7	4

Source: World development indicators (World Bank)

The above single digit but fluctuating growth statistics are quite disturbing. They are far from being satisfactory and obviously points towards an ailing economy. There is widespread recognition in the international community that excessive foreign indebtedness of many developing countries remains a major impediment to their growth, stability, and economic development (Audu, 2004; Mutasa, 2003). Against this backdrop, the natural question that readily comes to mind is: How beneficial has these sources of external debt been to our economic growth and development?

This study will seek to investigate the various components of Nigeria's external debt profile. This is with a view to ascertaining the usage to which such funds were put, the direction and significance of the effects of such external debts and the types that have been more beneficial to our economic growth and development.

1.3 Objectives of the study

Centrally, the study is intended to ascertain the impact of various components of external debts on the economic development of Nigeria. It will investigate the mismatch between external debts incurred by Nigeria, within the period (1969-2011) and the stunted level of economic growth and development for the corresponding period.

1.4 Research Question

Having stated the above objectives, the following research questions are therefore considered relevant to the study.

- i) What is nature of the relationship between external debts procured from multilateral creditors, Paris club, London club, promissory notes and other forms of external debts on the level of economic development in Nigeria?

ii) What is the influence of debts incurred through the multilateral creditors, Paris club, London club, promissory notes and other forms of external debts on the level of economic development in Nigeria?

The present study would search for answers to the above questions:

1.5 Hypotheses of the study

The following hypotheses shall be tested in this study:

Ho₁: There is no significant long run relationship between the segregated components of external debt and the level of economic development in Nigeria.

Ho₂: External debts individually do not have any significant impact on the level of economic development in Nigeria.

Ho₃: There is no causality relationship between External debts and economic development in Nigeria

1.6 Scope of this study

External debt and economic development is a very broad area. This study as a matter of fact is limited only to the Nigeria economy. The period of investigation is delineated from 1969 to 2011, a period of 42 (forty two years).

2.0 Literature Review

2.1) Review of Models / Theories

Overtime, some theories have been developed to explain what deficit financing is all about and who bears the final burden of repayment. Such theories include the:

- Debt overhang theory
- Learner's model theory
- Overlapping generation model
- Neo-classical model /the crowding out hypothesis
- Ricardian model
- Dual gap Analysis

These models / theories are briefly discussed below:

2.1.1 The Debt Overhang Theory: This theory is based on the premise that, if debt will exceed the countries repayment ability with some probability in the future, then expected debt service is likely to be an increasing function of the country's output level. The debt overhang acts as an anticipated foreign tax on both current and future income. Thus, since part of the future return, on any investment will accrue to the creditor as bigger debt service payments, it discourages capital accumulation and promotes capital flight. Secondly, there is a credit-rationing effect. An indebted country is likely to face credit constraint in the international market. Thirdly, as a result of the complementarities between public and private investment, the amount of money that is used to service debt crowds out public investment and discourages private investment. Fourthly, there is a high degree of uncertainty in the debt rescheduling exercise. Not only are some countries not too sure of what they face but a lot of time is spent negotiating. This degree of uncertainty creates instability in the pursuit of macroeconomic objectives and thereby discourages domestic investment. Disincentive effects to investment may' also arise from the perspective of the investors' expectation about macroeconomic policies that are required to service large external debt.

2.1.2) Lerner's Model: According to Lerner (1948), an internal debt creates no burden for the future generation; members of the future generation simply owe it to each other. When the debt is paid off, there is a transfer of income form one group of citizens to another. The study is different for an external debt. If borrowed fund is used to finance current consumption, in this case, the future generation certainly bears a burden, because its consumption level is reduced by an amount equal to the loan plus the accrued interest that must be sent to the foreign lender. If on the other hand, the loan is used to finance capital accumulation, the outcome depends on the projects productivity. If the marginal return on investment is greater than the marginal cost of funds obtained abroad, the combination of the debt and capital expenditure actually makes the future generation better off, to the extent that the projects return is less than the marginal cost, then the future generation is worse off.

2.1.3) Neoclassical Model/Crowding out hypothesis: This model asserts that when government initiates a project, whether financed by taxes or borrowing, resources are removed from the private sector. One usually assumes that when tax finance is used, most of the resources removed, come at the expense of consumption. On the other hand, when government borrows, it competes for funds with individuals and firms who want the money for their own investment project. Hence it is generally assumed that debt has most of its effect on private investment, to the extent that these assumptions are correct, debt finance leave the future generation with a smaller capital stock, *ceteris paribus*. The assumption that government borrowing reduces private investment plays a key role in the neoclassical analysis. It is sometimes referred to as the crowding out hypothesis.

2.1.4) Richardian Model: The Ricardian equivalence proposition (also known as the Barro–Ricardo equivalence theorem suggests that it does not matter whether a government finances its spending with debt or a tax increase, since the effect on total level of demand in the economy is the same. (Wikipedia, the free encyclopedia)

2.1.5 An Overlapping Generation Model: This model suggests a natural framework for comparing across generations the burden (and benefits) of government fiscal policies. This framework as enunciated by Auerbach, Gokhale and Kotlikoff (1991) is called the generational accounting. By comparing the net taxes paid by different generations, one can get a sense of how government policy redistributes income across generations.

2.1.7 The Dual Gap Analysis: This theory explained that development is a function of investments and that investment which require domestic savings, is not sufficient to ensure that development take place. There must be the possibility of obtaining from abroad the amount that can be invested in any country, which is identical with the amount that is saved. This is the basis of dual gap analysis

2.2) Empirical review:

There is a plethora of studies in the area of external debt and economic development. We intend to restrict the empirical reviews mainly from the Nigerian perspective.

Anyanwu et al (1997) was of the opinion that whole scale of white elephant development project in the country was the root cause of our external debt problems. He said that emphasis ought to have being placed on small rural development project so as to reverse the chaotic trend of urbanization and lessen the opportunity for corruption.

Okonji – Iweala (2003) added another dimension to the external debt saga when she noted that while a great deal of attention has been given to the size of debts and others, not much has been said about the institutional arrangements for proper management of the debt, which obviously can impact on how size of debt affects economic development

Audu (2004) examined the impact of external debt on economic growth and public investment in Nigeria from 1970-2002. The study shows that debt servicing pressure in the country has had a significant adverse effect on the growth process and that past debt accumulation negatively affected public investments. Audu further added that, Nigeria frequently diverts resources to take care of pressing debt service obligations instead of being allocated to the development of infrastructures that would improve the well being of the citizenry.

Osinubi, Dauda and Olaleru (2006) confirmed the existence of a debt Laffer and Non-linear effect of external debt on economic growth in Nigeria. Thus, heavily indebted countries in sub-Saharan Africa need to evolve creative strategies for bringing about debt reduction so that the high debt stock and associated crushing debt service burden would not impact too negatively on economic growth.

According to Iyoha, a post debt relief review reveals that Nigerians, rather than having a positive feel of this phenomenon i.e. debt relief, the standard of living of an average Nigeria has worsened due to escalating prices of essential commodities and growing food shortages.

Idowu K. (2006) agreed on the fact that the recent debt relief granted by the Paris club is a giant step in the right direction. However, he suggested that the Nigerian nation cannot afford to relent in her efforts towards removing the country from debt burden still outstanding with other multilateral bodies. He strongly feels that it is possible for Nigeria to be a debt free nation with serious determination and discipline on the part of the government.

Adepoju, Salau and Obayelu (2007) analyzed the effects of external debt management on the economic growth of Nigeria. *Their study concluded that though* debt is an important resource needed to support sustainable economic growth; a huge external debt without servicing as was the case for Nigeria before year 2000 constituted a major impediment to the revitalization of her shattered economy as well as the alleviation of debilitating poverty

Ayadi and Ayadi (2008) examined the impact of the huge external debt, with its servicing requirements on economic growth of the Nigerian and South African economies. *Their study concluded that external debt performs better in South Africa than Nigeria as it contributed positively to the growth of the South African economy. This study, however, did not bring out the impact on the components of economic growth and neglected the long run impact on economic development.*

Ayadi (2008) further opined that Nigeria has been utilizing external debts to the extent that it has becomes so huge to water down substantial part of the country's revenue. Despite the increasing nature of the debt stock, until the recent decline due to debt cancellation and relief, the economic development of Nigeria has not been encouraging, especially looking at the economic development in terms of its basic components such as employment creation and poverty reduction.

Adesola (2009) empirically investigated the effect of external debt service payment practices on the economic growth of Nigeria. The study provides evidence that debt payment to Paris club creditors and Promissory Notes holders are positively related to GDP and GFCF while debt payment to London club creditors and other creditors show a negative significant relation to GDP and GFCF.

Ogunmuyiwa (2011) examined whether external debt promotes economic growth or not in Nigeria. The results revealed that causality does not exist between external debt and economic growth in Nigeria.

Akujuobi (2012) did a study on the impact of different types of external debt on economic development of Nigeria using the multiple regression technique. Result of his research found that while London Club debts were negatively significant, only past values of gross domestic product (GDP), taken as independent variable, was

found to be positively significant. He therefore recommended that Nigeria should not only be careful in taking new loans but to make sure that any one taken is channeled to productive uses.

The above studies served as reference material for future and further works in the area of external debt management. They have opened up a new vista on post debt relief study of Nigeria.

2.3) Conceptual framework

Nigeria's External Debts: These are Nigeria's debts that originated from outside the Nigeria economy. Prior to 2006, the major sources of Nigerians external debts include:

1. **The Paris club of creditors:** This represents only government guaranteed credits. The countries involved guaranteed the export activities of their importers through their official export credit agencies. If the recipient nation's government is unable to pay the foreign exchange equivalent of the domestic currency owed by the importer, it becomes government debts owed to creditor nations. Members of the club include USA, UK, Federal Republic of Germany, France and Canada.

2. **London club of creditors:** These are mainly uninsured and unguaranteed debts of commercial banks in industrialized countries to national of debtor nations. Members of the club are the commercial banks

3. **Multilateral Creditors:** These are international institutions founded by member nations that provide credit for development purposes. Examples of such institutions include the World Bank, IMF, African Development Bank (ADB) etc.

4. **Promissory Notes:** These are uninsured trade credits arising mainly from trade arrears. The debts are refinanced by the issuance of promissory notes to the creditors.

5. **Bilateral and private sector creditors:** A government to another government usually for development purposes provides a bilateral credit. Private sector credits are usually from commercial Banks, Individual Suppliers and institutional investors in form of suppliers or buyers credit. Private sector credits are usually short term.

After the debt relief program of 2006, Nigeria external debt profile was basically limited to the Multilateral Creditors and other miscellaneous debts.

2.3.1. Factors that contributed to Nigeria's External debt problem

The causes of Nigeria's external debt problem included the decline in oil earnings occasioned by the oil glut in the late '70's, lack of clear cut policies on debt management, rapid growth of public expenditure especially for capital projects and an import oriented consumption pattern

2.3.2 External debt burden and debt serving capacity.

The external debt situation of a country is often measured by a number of macroeconomic aggregates and debt data. This ratio's generally offer some measure of cost of debt servicing. The following ratios are often used: Total debt service to exports of goods and servicing, total debt service to Gross Domestic Product (GDP), Interest payments to export of goods and services, Interest payments to the Gross Domestic Product (GDP), Total debt service to the Gross Domestic Product (GDP), Reserves to debt outstanding and disbursed and Total external debt to export of goods and services.

2.3.3 Analysis of Nigeria's debt burden from 1978 to 2011.

The origin of Nigeria's debt dates back to 1958 when a sum of US\$ 28 million was contracted for the construction of rail lines. Between 1958 and 1977, resort to foreign debt was minimal as debts contracted during the period were concessional debts from bilateral and multilateral sources with longer repayment periods and interest rates constituting about 78.5% of the total stock.

From 1978, following the collapse of oil prices, pressure was exerted on government finances. It became necessary to borrow for balance of payment support and project financing. This led to the promulgation of Decree 30 of 1978 limiting the external loans the federal government could raise to =N=5 billion. The first major borrowing of US\$1 billion referred to as "jumbo loan" was contracted from the international capital market in 1978, thereafter external loans increased rapidly but loans from bilateral and multilateral sources declined, shifting the borrowing to private sources at stiffer rates. By 1982, the total external debt stock was =N=8,819.40 million. Nigeria's external debt rose further to =N=298,614.40 million in 1990. This increased steadily to =N=716,865.60 million as at the end of December 1995. According to the CBN statistical bulletin, the total external debt outstanding as at the end of 1999 was =N=2,577,374.40 million. That was the balance owed to the Paris club, London club, the multilateral creditor, promissory note holders and others.

At the inception of civilian administration in 1999, Nigeria and other debtor nations canvassed for debt cancellation but to no avail. A number of factors contributed to the increased size of Nigeria's external debt which by the end of 2001 stood at =N=3,176,291 million. This includes the fact that the Brandy bond which Nigeria invested in, in the 80's have declined from around 73% of face value to 58%. Also a 40% fall in oil revenue in 2001 as a result of the production quotas imposed on the organization of Petroleum exporting countries (OPEC). Nigeria's external debt rose to =N=3,932,884.80 million in 2002, =N=4,478,329.30 million in 2003, =N=4,890,269.60 million in 2004 and =N=2,695,072.20 million in 2005. Following the debt relief of 2006 from the Paris and London clubs, Nigeria's external debt profile as at 2009 stood at =N=590,441.08 million.

According to the Central bank of Nigeria and the Debt management office, Nigeria's external debt profile as at 2011, stood at ₦896.832.62million, comprising of ₦723,109.26 million from the multilateral club and ₦173,723.26million from other miscellaneous sources.

2.3.4 Method or ways applied in the repayment of Nigerian external debts.

The method or ways adopted by Nigerian, so far in the tackling of her public debt includes: Debt rescheduling, Debt equity conversion, Counter trade introduction, Debt - buy back, Ban on external borrowing, Reliance on foreign aids/assistance, Economic restructuring and Debt forgiveness / relief program.

2.3.5. Problem of debt management in Nigeria

There are lots of problems that militate against effective debt management in Nigeria. This included dearth of statistical data, institutional framework, ineffective law and regulations and the low yield on debt instruments. It is pertinent to mention here that, with the establishment of a Debt management office, most of the problems highlighted above, have been taken care of.

3.0 Research Methodology

3.1 Research Design: To ascertain the impact of disaggregated components of external debts on the economic development of Nigeria, a least square regression analysis will be carried out on a time series data. The essence will be to test the relationship between the variables whether positive or negative and if significant or not (Elbadwi, 1992).

3.2 Specification of models: Gross domestic product figures for the period 1969-2009, herein represented by the symbol GDP_t , (standing in for economic growth and development) are regressed on components of external debt profile for the corresponding period. The components of external debt profile are hereby represented as follows:

$Mult_t$ = Multilateral debt in year, t.

$Prcl_t$ = Paris Club debt in year, t.

$Lncl_t$ = London club debt in year, t.

Prm_t = Promissory notes in year, t and

$Odas_t$ = Miscellaneous types of external debts in year, t.

t = Time and e = The error term assumed to be normally and independently distributed with zero mean and constant variance, which captures all other explanatory variables which influence economic growth but are not captured in the model

3.2.1) Justification of the chosen variables

Economic development (GDP_t): There are many factors that are used in measuring economic development in a given nation. In this study, we have chosen to adopt the concept of gross domestic product. It is the standard measure of a nation's production and income, as it captures the salient aspect of economic growth as well as economic development (Enu: 2009).

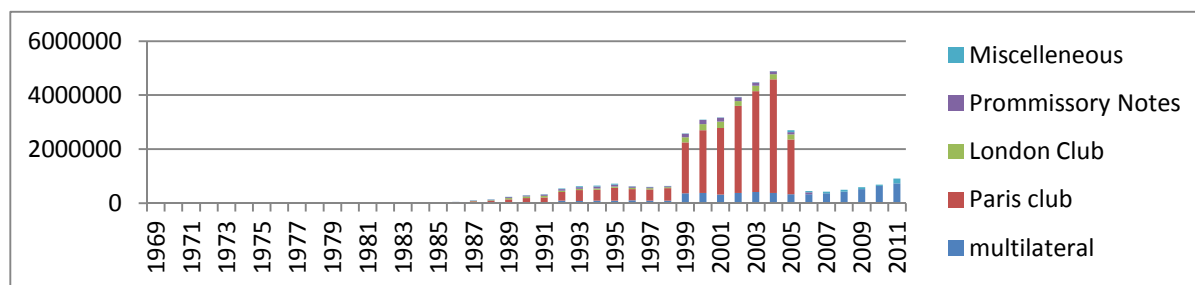
Multilateral debt ($Mult_t$), Paris Club debt ($Prcl_t$), London club debt ($Lncl_t$), promissory notes (Prm_t) and other sources of external debt ($Odas_t$): These variables are adjudged as the major sources of external loans to Nigeria. Their inputs are expected to impact positively on the economic growth and development of any nation. Therefore, their respective coefficients $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are expected to be positive i.e. $\beta_1, \beta_2, \beta_3, \beta_4$, and $\beta_5 > 0$

4.0 Data Presentation and Analysis

As a prime objective, this section focuses on the presentation and analysis of data for the study. Also, it aims to interpret the results obtained therein, so that policy implications can be drawn. Two (2) hypotheses of this study were individually tested using a multiple regression model to ascertain the relationship between components of external debts and economic development in Nigeria, while the third will be subjected to a granger causality test.

4.1 Data Presentation: Data for our estimation was generated from various publications of the Central Bank of Nigeria and the Debt management offices, Abuja. These are aptly captured in the chart below:

Graphic Representation of Nigeria's External Debt Components



4.2) Data estimation:

Unit root test: Components of external debt and its impact on the economic development of Nigeria

Unit Root Tests: The unit root test is carried out using Elliot–Rothenberg stock optimal test and the Phillips–Perron test to determine whether the data sets are stationary or not and the order of integration. From the output table below, we observed a mixed bag scenario. While some variables turned stationary at “ level”, others were at “ first difference”; and yet a third group at “second difference”, meaning that the data sets are not spuriously related.

Components of external debt and its impact on the economic development of Nigeria

Elliot Rothenberg Stock Point –Optimal unit Root Test					Phillips –Perron Unit Root Test				
Variables	T-Stat.	Critical Value	Order of Integration	Sig.	Variables	T-Stat.	Critical Value	Order of Integration	Sig.
MULT	43.98	2.97	Level	**	MULT	-5.02	-3.60	1 st Diff	**
PRCL	263.44	2.97	2 nd Diff	**	PRCL	-3.82	-3.60	1 st Diff	**
LNCL	43.30	2.97	Level	**	LNCL	-5.63	-3.60	1 st Diff	**
PRM	3.81	2.97	Level	**	PRM	-4.70	-3.60	1 st Diff	**
ODAS	3.80	2.97	Level	**	ODAS	-4.34	-3.60	1 st Diff	**
GDP		2.97	2 nd Diff	**	GDP	-15.59	-3.60	2 nd Diff	**

Source: Computed with E-view statistical package- version 7.

4.3) Co- integration Tests: Two likelihood ratio tests (trace and maximum eigenvalue) were used to test the hypotheses regarding the number of co-integrating vectors. Result of tests for co-integration among the variables of external loans and economic development in Nigeria are reported in the table below.

Trace test					Max Eigen value test				
Hypothesized No. of CEs	Eigen value	Trace Stats	0.05 Critical value	Prob**	Hypothesized No. of CEs	Eigen value	Max-Eigen Stats	0.05 Critical value	Prob**
None *	0.845070	187.0023	95.75366	0.0000	None *	0.845070	76.45614	40.07757	0.0000
At most 1 *	0.727063	110.5462	69.81889	0.0000	At most 1 *	0.727063	53.23910	33.87687	0.0001
At most 2 *	0.497068	57.30706	47.85613	0.0051	At most 2*	0.497068	28.17930	27.58434	0.0419
At most 3	0.412668	29.12776	29.79707	0.0596	At most 3	0.412668	21.81874	21.13162	0.0400
At most 4	0.162494	7.309016	15.49471	0.5420	At most 4	0.162494	7.270383	14.26460	0.4577
At most 5	0.000942	0.038634	3.841466	0.8441	At most 5	0.000942	0.038634	3.841466	0.8441
Trace test indicates 3 co-integrating equations at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level					Max-eigenvalue test indicates 4 co-integrating equations at the 0.05 level* denotes rejection of the hypothesis at the 0.05 level				

Source: Computed with E-view statistical package- version 7

Thus, we reject the null hypothesis of no co-integration($r=0$) amongst the variables as the trace statistics yielded a co-integration rank of $r = 3$, while the maximum eigenvalue produced a co-integration rank of $r=4$, where r represents the number of co-integrating vectors and n , the number of variables in the estimated equation. This verifies the existence of an underlying long run stationery steady state relationship between GDP and the categories of external debts owed by the Nigerian sovereign state

4.4 Hypotheses Testing

The following hypotheses shall be tested in this study:

Ho₁: There is no significant long run relationship between the segregated components of external debt and the level of economic development in Nigeria.

Ho₂: External debt indicators individually, do not have any significant impact on the level of economic development in Nigeria.

Ho₃: There is no causality relationship between External debts and economic development in Nigeria

Summary of Global Statistics: Ordinary least Square (OLS) & Vector Autoregressive (VAR) Models.

Table 4.4: Test Statistics	Model 1(OLS)	Model2(VAR)
R-Square	0.976428	0.991763
Adjusted R-Square	0.973243	0.990016
S.E of Regression	1566981.	973376.2
Sum of Squared Residual	9.09E+13	3.13E+13
Log Likelihood	-671.1637	-619.0562
Durbin Watson Statistics	1.474828	2.013906
Mean Dependence Variance	5280065.	5537413.
SD Dependence Variance	9579486.	9741426.
Akaike Infor. Criterion	31.49599	30.58811
Schwarz Criterion	31.74174	30.92246
F-Statistics	306.5324	567.6145
Prob-(F-Statistics)	0.000000	0.000000

Source: Computed with E-view statistical package- version 7.

From table 4.4 above, in the short run, OLS model posted an R-Square of 97.64%, Adjusted R-Square 96.325%, Standard Error 1566981, Log Likelihood- 671.16, Akaike information criterion 31.49 and Schwarz criterion of 32.74. In order to confirm the specification status of our model, we employ the analysis of variance or ANOVA, for short. Since F-ratio calculated (306.53) is greater than F-ratio critical (3.51, 2.45), at both 1% and 5% Alpha levels. We conclude thus; that the model is quite significant in the short run. In the long run, the VAR model posted an R-Square of 99.17%, Adjusted R-Square 99 %, Standard Error 973376.2, Log Likelihood- -619.06, Akaike information criterion 30.59 and Schwarz criterion of 30.92. Applying the ANOVA rule, since F-ratio calculated (567.61) is greater than F-ratio critical (3.12, 2.25), at both 1% and 5% Alpha levels,. Thus, we reject H_{01} and conclude that external debts have a significant long run relationship with the level of economic development in Nigeria,

Test of hypothesis 2: External debts individually do not have any significant impact on the level of Economic development in Nigeria.

Having tested the significance of model, we go a step further to test the significance of components of external debt in contributing to the total variation in the level of economic development in Nigeria. This is achieved through the student t-test. We refer to the regression result in table 4.4 below:

Table 4.5: T-Statistics Table- in the short run

Test Statistics	MULT	PRCL	LNCL	PRM	ODAS
Coefficient of the variable	45.14664	0.226680	-17.34100	-54.21479	42.65046
Standard Error	2.788814	0.678023	13.55056	14.17433	15.40331
T-Statistics Calculated	16.18847	0.334325	-1.279726	-3.824857	2.768915
T-Statistics Tabulated@1%	3.51	3.51	3.51	3.51	3.51
T-Statistics Tabulated@5%	2.45	2.45	2.45	2.45	2.45
Significance	0.0000	0.7400	0.2086	0.0005	0.0087

Source: E-views version 7.0 statistical package

From table 4.5 above, multilateral and miscellaneous sources of debts proved to have positive significant relationships with economic development in Nigeria in the short run, while Promissory notes maintained a significant negative relationship. Other components of external debt had no significant impact on the economic development of Nigeria.

Note: F-ratio tabulated DF@ Short run = (5, 38); 1% = 3.51, 5% =2.45, T-ratio DF (38), 1% =2.7, 5%= 2.02., F-ratio tabulated DF@ long run = (7, 36); 1% =3.12, 5%= 2.25, T-ratio DF (36), 1% =2.7, 5% = 2.02

The resulting estimated model for Nigeria in the short run is given as:

$$\text{GDP} = 405503.6 + 45.15\text{MULT}_t + 0.23\text{PRCL}_t - 17.34\text{LNCL}_t - 54.21\text{PRM}_t + 42.65\text{ODAS}_t, \dots \text{Equation 4.1.}$$

Next, is to ascertain the impact of external debts on the economic development of Nigeria in the long run.

Table 4.6: T-Statistics Table- in the Long Run

Independent Variable	MULT	PRCL	LNCL	PRM	ODAS	GDP (t-1)	GDP (t-2)
Coefficient of the Variable	1.038010	0.603288	-8.749190	5.708216	9.440032	0.451817	0.791285
Standard Error	5.852350	0.464247	8.487505	12.28001	16.84320	0.268836	0.267930
T-Statistics Calculated	0.177366	1.299498	-1.030832	0.464838	0.560465	1.680639	2.953326
T-Statistics Tabulated@1%	2.7	2.7	2.7	2.7	2.7	2.7	2.7
T-Statistics Tabulated@5%	2.02	2.02	2.02	2.02	2.02	2.02	2.02
Significance	0.8603	0.2028	0.3101	0.6451	0.5789	0.1023	0.0058

Source: E-views version 7.0 statistical package

From table 4.6 above, the result shows that only the lagged value of GDP (in the second year), taken as an independent variable was found to be positively significant. In other words, there is no significant long run relationship between external debts and the level of economic development in Nigeria. Other sources of external debt that were hitherto significant in the short run, turned out to be insignificant in the long run. The outcome of this study is in tandem with earlier works by Akujuob in 2012. The resulting estimated model for Nigeria in the long run is given as:

$$GDP = -48664.07 + 1.04MULT_t + 0.60PRCL_t - 8.75LNCL_t + 5.71PRM_t + 9.44ODAS_t + 0.45GDP_{(t-1)} + 0.79GDP_{(t-2)} \dots \dots \dots \text{Eq.4.2}$$

4.4. Test of Hypothesis 3: There is no causality relationship between domestic debts & economic growth in Nigeria

Table4.6: Result of the Granger Causality Test

Null Hypothesis:	Observations	F-Statistic	Prob.
LNCL does not Granger Cause GDP	41	5.29561	0.0096
GDP does not Granger Cause LNCL		0.31825	0.7294
MULT does not Granger Cause GDP	41	5.28782	0.0097
GDP does not Granger Cause MULT		4.67501	0.0157
ODAS does not Granger Cause GDP	41	0.75905	0.4755
GDP does not Granger Cause ODAS		41.9673	4.E-10
PRCL does not Granger Cause GDP	41	7.54072	0.0018
GDP does not Granger Cause PRCL		0.25821	0.7739
PRM does not Granger Cause GDP	41	3.82256	0.0312
GDP does not Granger Cause PRM		1.69965	0.1971

Source: E-Views version 7 statistical package.

The above hypothesis is stated in a null form while the alternative is implied. For the period under review, result of the Granger causality test indicates that: (i) There is a unidirectional relationship between external debts incurred through the London and Paris clubs with economic development in Nigeria (ii) Economic development in Nigeria granger causes miscellaneous forms of debts and. (iii) There exists a bidirectional relationship between multilateral debts and economic development in Nigeria.

4.5 Application of Research Findings and Contribution to Knowledge: One of the major contributions of present study therefore is that it is possible from the model of equations 4.1 and 4.2 respectively, to predict the result or level of economic growth and development in Nigeria (At both the short and long runs), given that the levels of disaggregated components of external debts are known

$$GDP = 405503.6 + 45.15MULT_t + 0.23PRCL_t - 17.34LNCL_t - 54.21PRM_t + 42.65ODAS_t \dots \dots \dots \text{Equation 4.1.}$$

$$GDP = -48664.07 + 1.04MULT_t + 0.60PRCL_t - 8.75LNCL_t + 5.71PRM_t + 9.44ODAS_t + 0.45GDP_{(t-1)} + 0.79GDP_{(t-2)} \dots \dots \dots \text{Eq.4.2}$$

5.0. Findings, Conclusion and recommendations

It is pertinent at this juncture to briefly summarize the outcome of our research efforts, thereafter make some policy recommendations based on the findings.

5.1 Summary of findings

- In the short run, multilateral and miscellaneous sources of loans maintained a positive significant relationship with economic development in Nigeria, while Promissory notes maintained a significant

negative relationship. Other components of external debt had no significant impact on economic development in Nigeria.

- In the long run, only the lagged value of GDP (in the second year), taken as an independent variable was found to be positively significant. In other words, there is no significant long run relationship between external debts and the level of economic development in Nigeria. Other sources of external debt that were hitherto significant in the short run, turned out to be insignificant in the long run.
- Result of the Granger causality test indicates that, (i) There is a unidirectional relationship between external debts incurred through the London and Paris clubs with economic development in Nigeria (ii) Economic development in Nigeria granger causes miscellaneous forms of debts and. (iii) There exists a bidirectional relationship between multilateral loans and economic development in Nigeria

5.2. Conclusion and Recommendations

The above research findings have revealed that Nigeria's external debt profile is not making the desired positive impact on her economic growth and development, both in the short and long runs. This call for a greater caution and transparency in the way government funds are being handled. Government should not be seen as borrowing money for the sake of it. Loans should be channeled appropriately only to useful ventures

5.3 Recommendations: Nigeria is not a pariah state, and as such cannot operate in isolation. On the basis of above results, we proffer below the following growth enhancing conditions that could help to grow and our develop economy:

Development activities should be financed through increased export earnings ; spearheaded by an export-led growth strategy. As part of a broader strategy to assist in the management of our external debt, the international community should provide a conducive environment for exports from the low-income countries including Nigeria. This will enable her earn more revenues to pay off debts. As a matter of fact, Nigeria should export more to get rid of debt owed the multilateral creditors and other miscellaneous sources. It is high time we diversify our export base away from oil. There are lots of potentials and opportunities in the solid mineral sector. We need to look in that direction.

Nigeria should not only be careful in taking new loans but to make sure that any one taken is channeled to productive uses. They are not for profligacy! We should be wary of our uninsured trade credits arising from trade arrears. As debts that are refinanced through issuance of promissory notes have been found to have a negative impact on our economic growth and development

If government must continue to borrow, then she must concentrate on domestic borrowing as interest and loan payments will impact positively on the overall economy. Nigeria must not relent in attracting foreign direct investments (FDI), but must not allow it to over crowd her local produce. Again, we should refrain from giving lots of subsidies.

Lastly, the federal government of Nigeria should implement strategies for a continued debt reduction, as dependence on external debts for the execution of major projects, may greatly undermine growth prospects and thus put an additional burden on fiscal sustainability. We cannot afford to relent in our efforts at paying off the outstanding debt owed the multilateral creditors and other miscellaneous sources. It is possible for Nigeria to be a debt free nation with serious determination and discipline on the part of our government.

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