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Value Creation through Public Debt and Economic Growth of Nigeria

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ABSTRACT

The study examined the effect of value creation through public debt on economic growth in Nigeria between 1986 and 2016 using Autoregressive Distributed Lag (ARDL). The variables used in the study are a real gross domestic product, internal debt, external debt and Total debt service of Nigeria. They were tested for stationarity using the Augmented Dickey-Fuller and Philip Perron test. The result showed that the variables are stationary at first differencing. Co-integration test was also performed and the result revealed the presence of co-integration between public debt and economic growth. The co-integration results show that public debt and economic growth have long run relationship. The findings of the ARDL model via short run model result and long-run model result between public debt and economic growth in Nigeria is that in the short run external debt and internal debt are negatively related to the real gross domestic product but has effect on the economic growth, external debt is negatively related but has no effect to the economic growth. Whereas in the long run model, internal debt and debt service are also negatively related to the real gross domestic product but significant to the economic growth, external debt is positively related but has no effect to the economic growth. The study concluded that public debt and economic growth have long-run relationship, and they are positively related if the government will create the value that citizens desired by being sincere with the loan obtained and use it for the development of the economy rather than channel the funds to their personal benefit.

Key Words: External Debt, Internal Debt, Economic Growth, Debt Service, Real Gross Domestic Product.

1.0 Introduction

One most pertinent objective of macroeconomic policies in the early years has been the accomplishment of sustainable economic growth and development of an economy most especially the Less Developed Countries (like Nigeria) which are characterized by low capital formation due to the low level of domestic savings and investment. However, in the recent 50 years, public debt has been an essential source of financing economic growth for Nigeria through capital accumulation, infrastructure developments and resource developments. The debt crisis which occurred in 1990`s unstable the economy with low income, and debt relief incentive was given to Nigeria so as to relief the bad impact of high borrowing on the countries development by Ibrahim Dogan and Faik Bilgili, 2014.

In 2005, Paris club offered Nigeria a relief $12.4billion in exchange for the remainder of its $30billion official debt being written off. Nigeria`s plan to pay off its debt and restructure its economy was approved by the International Monetary Fund (bbc.co.uk 2006). There is an increasing concern that a large amount of external debts are retarding growth and considerable amounts of these debts are utilized in debt servicing mostly at the cost of expenditure meant for social-economic development. Muhammad Ramzan and Eatzaz Ahamad, 2014. The recent debt relief obtained through the IMF should, therefore, have some probable positive effect on Nigeria economy.

However, International Monetary Fund, 2002 states that Economic theory suggests that reasonable levels of borrowing by developing countries are likely to enhance its economic growth. Countries at early stages of development have small stocks of capital and are likely to have investment opportunities with rates of return higher than those in advance countries. However, as long as they use the borrowed funds for productive investment and do not suffer from macroeconomics instability and policies that distort economic incentives, growth should increase and allow for timely debt repayment.

Like most developing countries, Nigeria relies substantially on public funds for financing its development activities – roads network, electricity transformation, agriculture plantation etc. Such external funding usually takes the form of external loans Folorunso and Felix, 2009.

Most economist postulate that macroeconomics mismanagement is not only the cause of inactive growth but it also explains why some developing countries have become heavily indebted. Thus, while the problem of inactive growth can be attributed to public debt, the root of the debt crisis can be traced to poor policymaking and economic mismanagement Muhammad Ramzan and Eatzaz Ahamad, 2014. Public debt also improves total factor productivity through an increase in output which in turn enhance the Gross Domestic Product (GDP) growth of a nation. The importance of public debt cannot be overemphasized as it is a glowing amplifier of growth and thus improves the standard of living and thereby alleviate poverty. This study seeks to examine Nigeria public debt and its effect on her economy growth by covering the period of 31-year (1986-2016).

1.1 Research questions

This research seeks to assess the effect of value creation through public debt on economic growth in Nigeria and therefore endeavours to answer the following research questions;

- What is the trend and pattern of internal debt, external debt and debt service?
- What is the effect of internal debt, external debt and debt service on economic growth?
- What is the relationship between internal debt, external debt and debt service on economic growth?

1.2. Objectives of the Study

The broad objective of this study is to determine the effect of value creation through public debt on economic growth in Nigeria. However, there are specific objectives which would be considered as:

- To study the trend and pattern of internal debt, external debt and debt service.
- To examine the effect of internal debt, external debt and debt service on economic growth.
- To analyze the relationship between internal debt, external debt and debt service on economic growth.

1.3. Research Hypotheses

The hypotheses to be tested in the course of this study include:

Hypothesis 1

- $H_{0:}$ There is no significant relationship between the trend and pattern of internal debt, external debt and debt service.
- $H_{1:}$ There is a significant relationship between the trend and pattern of internal debt, external debt and debt service.

Hypothesis 2

- H_0: There is no significant relationship between the effect of internal debt, external debt and debt service on economic growth.

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- H_1: There is a significant relationship between the effect of internal debt, external debt and debt service.

Hypothesis 3

- H_0: There is no significant relationship between internal debt, external debt and debt service on economic growth.
- H_1: There is a significant relationship between internal debt, external debt and debt service on economic growth.

1.4 Literature Review

A CONCEPTUAL REVIEW

Debt according to Oyejide, 1985 is as the resource or money used in an organization which is not contributed by its owner and does not in any other way belong to them is a liability represented by a financial instrument or another formal equivalent. When the government borrows, the debt is public debt. Public debts are either internal or external, incurred by the government through borrowing in the domestic and international markets so as to finance the domestic investment.

Debt is classified as productive debt and deadweight debt. When a loan is obtained to enable the nation to purchase some sort of assets, the debt is said to be productive e.g money borrowed for purchasing factories, electricity, refineries etc. However, debt undertaken to finance war and expenses on current expenditures is dead weight debts. When a country obtains a loan from abroad, it means that the country can import from abroad goods and services to the value of the loan without at the same time having to export anything for exchange. When capital and interest have to be repaid, the same country will have to get the burden of exporting goods and service without receiving any imports in exchange. These two types of debt, however, require that the borrowers' future savings must cover the interest and principal payment (debt serving). Therefore, debt finance investment needs to be productive and well manage enough to earn a rate of return higher than the cost of debt servicing Ajayi and oke, 2012.

B Theoretical Review

Several theoretical contributions have been made as regards the subject matter of public debt and economic growth. These theories are of relevance to this study as they serve as building bones to this research work and as such the following theories will be discussed;

The Dependency Theory

The dependency theory originated from developing countries themselves in the 1770s. This theory is based on the assumption that resources flow from a "periphery" of poor and underdeveloped states to a "core" of wealthy states, therefore, enriching the latter at the expense of the farmer. Dependency theory states that the poverty of the countries in the periphery is not because they are not integrated or fully integrated into the world system as is often argued by free-market economists, but because of how they are integrated into the system. From this standpoint, a common school of thought is the bourgeoisie scholars. To them, the state of underdevelopment and the constant dependence of less developed countries on developed countries are as a result of their domestic mishaps. They believe this issue can be explained by their lack of close integration diffusion of capital, low level of technology, poor institutional framework, bad leadership corruption, mismanagement, etc. Momoh and Hundeyin, 1999.

The Neoclassical Theory

According to the neoclassical growth theory, debt has a direct effect on economic growth. This is because the amount borrowed, if used optimally, is anticipated to increase investment. As long as the country use the borrowed funds for productive investment and do not suffer from macroeconomic instability, policies that distort economic incentives or sizable adverse shocks, growth should increase and allow for timely debt repayment.

On the other hand, the indirect effect of debts is its effect on investment. The transmission mechanism through which debts affect growth is its reduction on the resources available for investment by debt servicing.

The Keynesian Theory

Keynes view fiscal policy as the best policy that brings about growth in any economy since it acts in the interest of the general public. According to Keynes, when the government embark on public borrowing to finance its expenditure, unemployed funds are withdrawn from the private pockets such that the consumption level of the private individual remains unaffected. This funds when injected back into the economy by the government leads to multiple increases in aggregate demand causing an increase in output and employment. Hence public borrowing can be used to influence the macroeconomic performance of the economy. Mattew and Mordecai, 2016. On the other hand, the indirect effect of public effect of public borrowing is its effect on investment.

Debt cum – growth Model

The original non-optimizing approach was advanced in the framework of "Debt-cum-growth" literature, in which emphasis has mainly been on foreign borrowing for investment purposes, i.e. for filling the gap between domestic investment and saving Abdullahi, Aliero and Abdullahi, 2013. The Debt-cum-growth Model considers debt capacity in terms of the benefit and cost borrowing in the process of economic growth. The basic argument is that a country will maintain its capacity to service debt provided that additions to its debt overtime contribute (sufficiently) to growth. A 'debt' cycle is proposed, in which the behaviour of capital flows may change over a number of stages which are closely linked to the course of economic growth.

The Profligacy Theory

The profligacy theory thesis attempts to correct the weakness of the Debtcum-growth model by focusing on the institutional arrangement under which a loan was contracted. The profligacy thesis, a component of the system stability theory, recognizes that the debt crisis arose from weak institution and policies that waste resources through unbridled official corruption and damaged living standard and development. These policies led to distortions in relative prices and encouraged capital flight as seen in the substantial external liquid fund of private citizens of countries in foreign banks.

C EMPIRICAL REVIEW

Ajayi and Oke, 2012 research the effect of external debt burden on economic growth and development of Nigeria. They adopted regression analysis of OLS on secondary data sourced from Central Bank of Nigeria, Economical and Financial review, Business Times, Financial Standards on variables like National Income, debt service payment, external reserves and interest rate. They revealed that the external debt burden had an adverse effect on the nation`s income and per capital income. However, they suggest that debt service obligation should be allowed to rise than foreign exchange earnings and the loan contracted should be invested in a profitable venture which will generate a reasonable amount for debt repayment.

The empirical analysis for the impact of external debt on growth is based on the application of ARDL approach to co-integration in the study of Ramzan and Eatzaz (2014) examine external debt growth nexus: Role of macroeconomics policies in Pakistan covering the period of 1970-2009. The result shows that external debt has a negative impact on growth but the adverse effect can be reduced or reversed in the presence of sound economic policy. The study further finds that for a given amount of total external debt heavier reliance on Bilateral rather than Multilateral debt tends to retard economic growth.

According to Jayaraman and Evanlan (2009) using panel data for the empirical analysis of six Pacific countries during the period of 1988-2004. This paper obtains that external debt contributes to growth in PIC`s in the short run growth enhance the image of PIC as an efficient user of the borrowed fund.

Muahanji and Ojah (2011) examine the extent to which two external shocks, the world interest rate and commodity price shock leads to external accumulation in Africa. This study begins by estimating the Dynamic Stochastic General Equilibrium (DSGE) model for the period of 1970-2007 on African countries. In their findings, they state that both world commodity price and world interest rate shocks impact of external debt accumulation in the majority of African countries sample. World commodity price shocks

lead to an increase in external debt while world interest rate shocks appear to discourage the accumulation of external debt.

Adegbite, Folorunso and Felix (2008) adopted a neo-classical growth model which incorporates the external sector on the study of the impact of Nigeria`s external debt on economic development. It was confirmed in this study that a negative impact on economic growth was ascertained. In addition, external debt contributes positively to growth up to a point after which its contribution becomes negative reflecting the presence of non-linearity effect.

The study by Greenidge, Drakes and Craigwell (2014) on external public debt of the Caribbean community using a panel unit roots test and Dynamic Ordinary least square method. It covers the period of 1987-2005. They that an increase in output gap leads to a reduction in the stock of external debt.

Siddique and Selvanathan, 2016 examine the short run and long relationship between external debt and economic growth in 40 highly indebted poor countries (HIPCs) over the period of 1970-2007 with the aid of growth accounting process. This study use panel data estimation of Auto Regressive Distributed Lag model. Their findings were consistent with the Debt Overhang hypothesis. Firstly, capital formation share of GDP has a positive impact on HIPC`s GDPs in the short run as well as in the long run. Secondly, debt as a share of GDP has a negative influence on the short run as well as in the long run. Thirdly, in the long run, the merchandise trade as a percentage of GDP has a positive influence on GDP. Lastly, population increase has a positive influence on the economic growth in the HIPC`s possibly due to its workforce.

As noted by Qian and Steiner, 2016 on how International reserves affect the maturity structure of external debt. From their theoretical models it shows that higher reserves may reduce the cost of both short term and long term external debt by lowering the riskiness of the debt contract: Reserves are a form of insurance that lowers the incidence of default and reduces the risk for creditors, they suggest that these effects reduce the cost of long term debt more than that of short term debt. This makes long term loans relatively more attractive and may induce a re-structuring of foreign debt to long term maturities. They empirically analyze a sample of 66 emerging and developing countries by using a dynamic panel data VAR framework which confirms the positive effect of reserve on the share of long term debt.

Lius and Gian, 2014 examine the determinants of external crises, focusing on the role of foreign liabilities and their composition. Using a variety of statistical tools and comprehensive data spanning 1970-2011, in this study, it shows that the ratio of net foreign liabilities to Gross domestic product is a significant crisis predictor. They find that (i) breaking down net external debt into its gross asset and liability counterparts does not add significant explanatory power to crisis predictor (ii) The current account is powerful predictor (iii) foreign exchange reserve reduces the likelihood of crisis more than other foreign asset holdings.

1.5 Research Design

The research design for this work is ex-post facto research design. It is a quasi-experimental study examining how an independent variable, present prior to the study affect a dependent variable. The methodology adopted in this study is Auto Regressive Distributed Lag (ARDL), Co-integration analysis using Augmented Dickey-Fuller (ADF) and Unit root test, Johansen co-integration techniques of estimation which provides coefficient estimates of the time -series data used in the analysis.

1.6 Population and sample size of the study

Polit and Hungler, 1999 refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study, the population was the impact of public debt and economic growth of all the countries. Out of all the survey of all the countries from the population, the sample of this study considered the impact of public debt and economic growth of Nigeria covering the period from 1986 to 2016.

1.7 **Model Specification**

This study seeks to examine the effect of value creation through public debt on economic growth of Nigeria for a period of 1986 to 2016. In order to appropriately capture the effect of public debt on economic growth of Nigeria, this study modified the empirical work of Okon EB, Maji, A, Danies Co., 2013.

This study makes use of autoregressive distributed lag (ARDL) model Pesaran et al., 2001 here to check the existence of the short and long-run relationship between real gross domestic product, internal debt, external debt and debt service. This study makes use of ARDL for two reasons. First, this approach is suitable for small and finite sample data period. Second, there are combinations of I (0) and I (1) order among the variables, which include in the model. Pesaran et al., 2001.

The functional form of the model is:

$$RGDP = f(EXTD, INTD, DBTS)$$

Where:

RGDP = Real Gross Domestic Product

INTD = Internal Debt

EXTD = External debt

DBTS= Debt service

Explicitly the model is given as:

$$\mathrm{LGDP}_t = \propto_0 + \propto_1 LGDP_{t-1} + \propto_2 LEXTD_{t-1} + \propto_3 LINTD_{t-1} + \propto_4 LDBTS_{t-1} +$$
$$\sum_{i-1}^{p} \phi \Delta LGDP_{t-1} + \sum_{i-1}^{q} \mu \Delta LEXTD_{t-1} + \sum_{i-1}^{r} \ell \Delta LINTD_{t-1} + \sum_{i-1}^{s} w \Delta LDBTS_{t-1} + \varepsilon_t$$

The dependent and independent variables are logged at the stage of unit root test because they are not stationary at a level rather they are at first difference.

1.8 **Estimation techniques and method of data analysis.**

In analyzing the results obtained as regards to the validity of the variables used in terms of their statistical significance, decision making will be made based on the following criteria:

Descriptive analysis

Descriptive analyses are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. It forms the basis of virtually every quantitative analysis of data. The following are the content of descriptive analysis: Mean, Median, Standard deviation, Skewness, Kurtosis: Jarque-Bera**,**

Correlation analysis

Correlation is a bivariate analysis that measures the strengths of association between two variables and the direction of the relationship, in terms of the strength of the relationship, the value of the correlation coefficient varies between +1 and -1. When the value of the correlation coefficient lies around ±1, then it is said to be a perfect degree of association between the two variables. As the correlation coefficient value goes towards 0, the relationships between the two variables will be weaker. The direction of the relationship is simply the + (indicating a positives relationship between the variables) or – (indicating a negative relationship between the variables) sign of the correlation.

Regression analysis

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Regression analysis is the process of modelling the relationship between the independent variable and one or more dependent variables. This technique is used for forecasting, time series modelling, and finding the causal effect relationship between the variables.

1.9 Discussion of findings

A DESCRIPTIVE STATISTICS

From the table 1.1, LGDP represents logarithm of Gross Domestic Product, LINTD represents logarithm of Internal Debt, LEXTD represents logarithm of External Debt, LDBTS represents logarithm of Debt Service. The description shows that the average values of LGDP, LINTD, LEXTD and LDBTS from 1986 to 2016 are #10.32 Billion, #6.71 Billion, #6.70 Billion and 1.90% while the mid observation of these variables when arranged in ascending or descending order are #10.14 Billion, #6.48 Billion, #6.92 Billion and 2.17% respectively. The table also indicates that the maximum obtainable values of these variables (i.e. LGDP, LINTD, LEXTD and LDBTS) given the values of the series from 1986 to 2016 are #11.14 Billion, #8.50 Billion, #9.31 Billion and 3.64%. On the other hand, the minimum values of the aforementioned variables are #9.63 Billion, #3.72 Billion, #3.35 Billion and -0.70%.

The standard deviation values showed the extent at which the observations are dispersed around their respective means and the standard deviation to mean ratio of LDBTS which is greater than 0.5 suggested high coefficient of variation (i.e. high dispersion) while, LGDP, LINTD and LEXTD indicate a lower dispersion since their standard deviation to mean ratio is less than, LEXTD is equal to 0.25. Also, considering the skewness statistics whose threshold value for symmetry (or normal distribution) is zero, none of the variables is exactly zero (although some are close to zero). While the skewness statistics of -0.411247, -0.374338 and -0.777911 for LINTD, LEXTD and LDBTS show that those variables are negatively skewed (since they are less than zero), LGDP is positively skewed since its skewness statistic is greater than zero. On the other hand, the kurtosis value whose threshold is three indicate that all variables are platykurtic (lowly peaked) of which none is leptokurtic (highly peaked). Although skewness statistics indicate that LGDP is normally distributed (since it is closer to 0) and kurtosis value indicates that only LINTD is normally distributed (since it is closer to 3), neither skewness nor kurtosis can singularly confirm the normality of a series. Hence, since the Jarque-Bera statistics combines skewness and kurtosis properties, it provides a more comprehensive information.

B REGRESSION STATISTICS

From table 1.2, the result is interpreted vertically. There is a moderate relationship between LEXTDEBT and LGDP given the correlation value of 0.49. However, there is a very strong relationship between LINTDEBT and LGDP at 0.94 correlation coefficient which implies that as internal debt rises, GDP also rises with it. At -0.82 value there is a strong negative relationship between LDEBTSERV and LGDP. By implication, as debt services increases, GDP reduces. At 0.69 coefficient there is a strong relationship between LINTDEBT and LEXTDEBT which implies that as internal debt rises, external debt also rises at an average level. There is a negative weak relationship between LDEBTSETV at -0.32. The relationship between LINTDEBT and LDEBTSERV is negatively strong at -0.78.

C GRAPHICAL STATISTICS

The graphical illustration shows the movements, trends, fluctuation, structural breaks and discontinuities in the series. It also provides a quantitative assessment of possible relationship among the series. The figures below show the graphical expression of relevant variables.

Figure 4.1 to 4.4 as provided below depict the movements and trends in LGDP, LINTD, LEXTD and LDBTS respectively. Figure 4.5 shows the relationship between LGDP, LINTD, LEXTD and LDBT.

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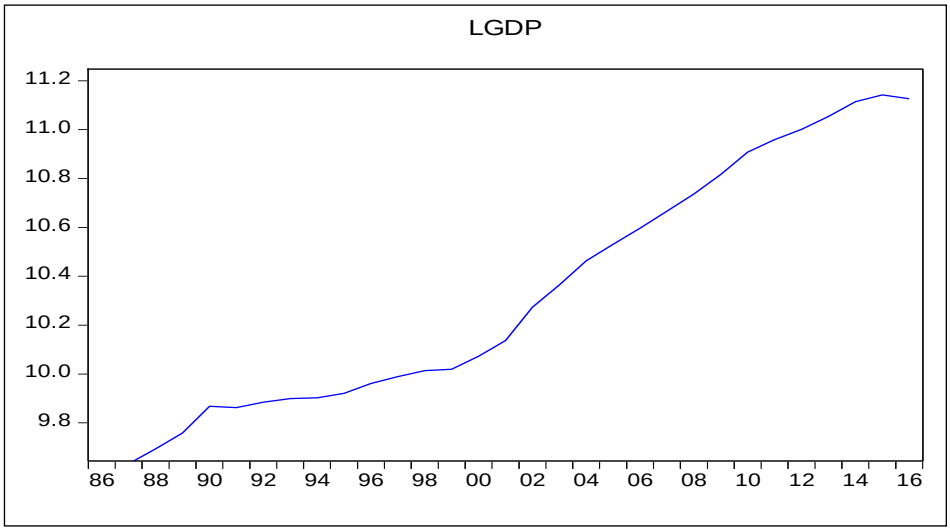
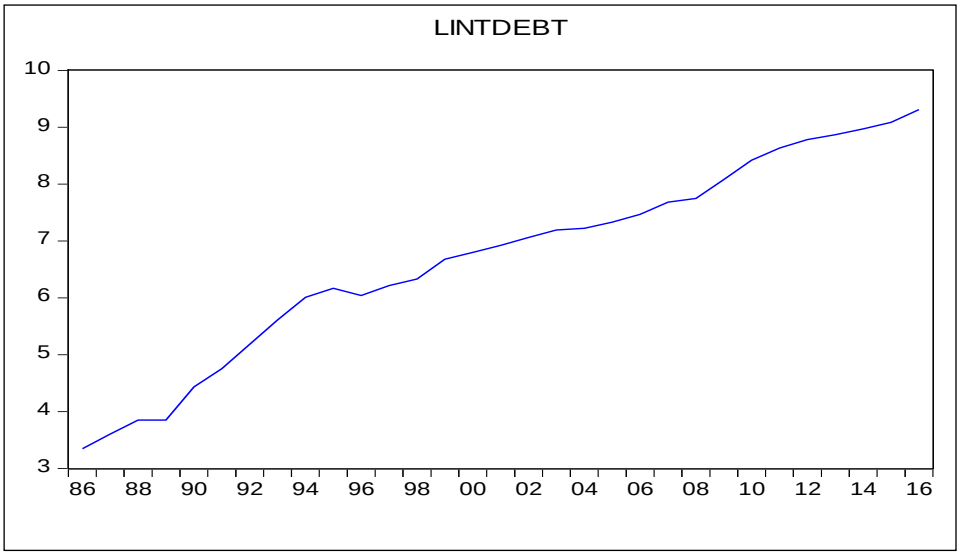
Fig 4.1 TREND IN GROSS DOMESTIC PRODUCT FROM 1986 TO 2016



Source; computation from Eviews 9 2018

The diagram above shows that there is a straight line movement on economic growth from 1986- 2001 and from 2002-2016 the growth begins to surge up, this is due to increase in the population, a high stable of oil price per barrel, increase in the balance of payment.

Fig 4.2 TREND IN INTERNAL DEBT



Source: computation from Eviews 9 2018

This diagram shows that there is a straight line movement from 1986-2016. Which means there is a normal increase of internal debt expended based on Nigeria`s ever-rising government expenditure, government budget deficit, react positively to increased socio-economic responsibilities and high domestic and international inflation rates.

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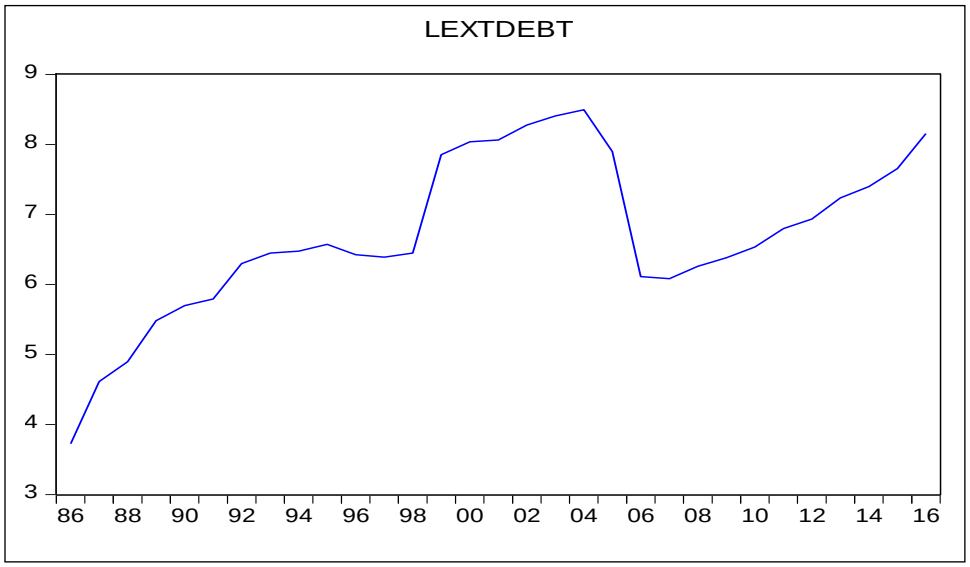
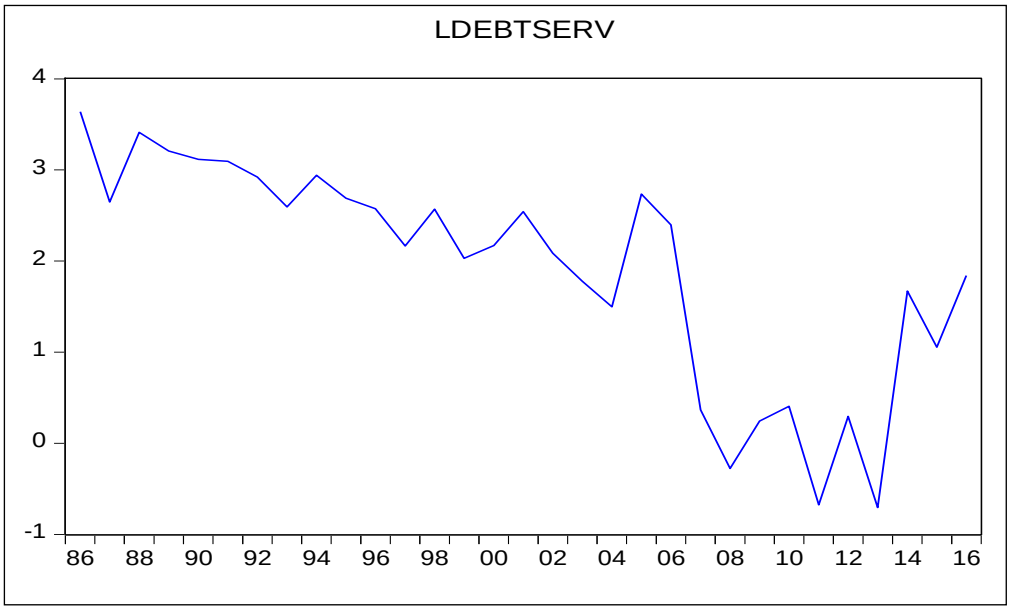
Fig 4.3 ***TREND IN EXTERNAL DEBT***



Source: computation from Eviews 9 2018

Actually, the diagram above shows the slight fluctuation in the external debt. There is a sharp upsurge from 1999-2005, where Nigeria owes a huge amount of $30billion, the trend drop sharply in the year 2006 due to the Paris club of Creditors giving a relief of $12billion.

Fig 4.4 TREND IN DEBT SERVICE



Source: computation from Eviews 9 2018

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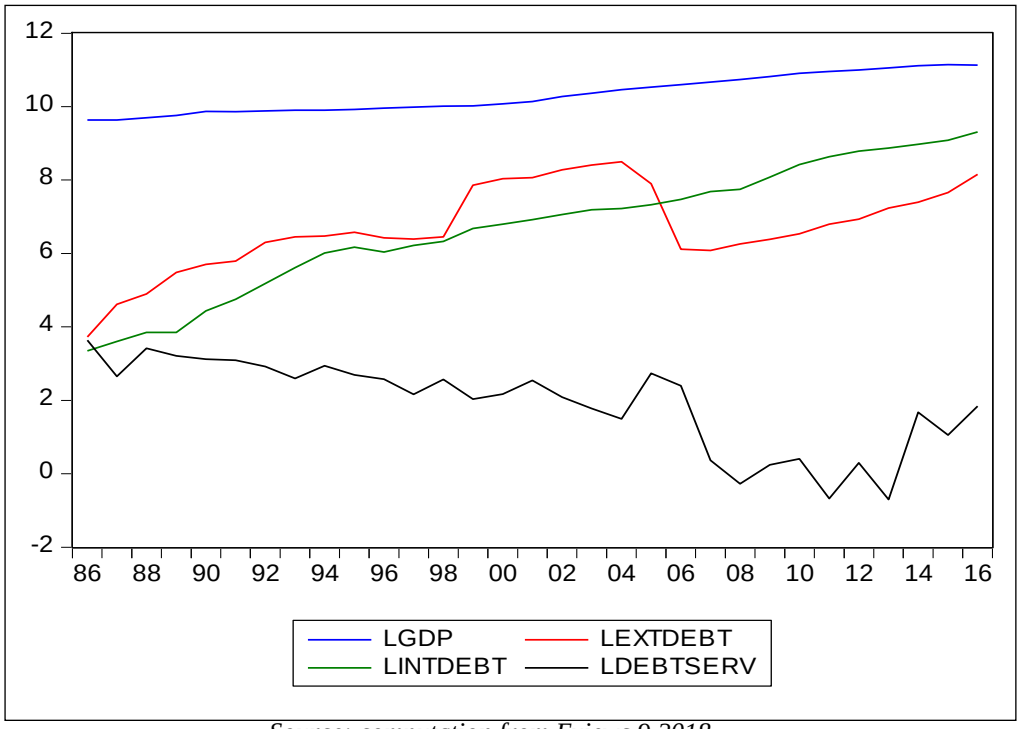
Fig4.5 TREND RELATIONSHIP BETWEEN LGDP, LINTD, LEXTD AND LDBTS



Source: computation from Eviews 9 2018

The graph above *Fig* 4.5 depicts a trend analysis of Real Gross Domestic Product (LGDP), Internal Debt (LINTD), External Debt (LEXTD) and Debt service (LDBTS) from 1986-2016. From the graph we see that LGDP and LINTDEBT maintain a relatively stable trend over the years, LEXTD starts very low and then fluctuates to an upward trend while LDBTS started very high and maintain a fluctuation trend.

Augmented Dickey-Fuller Test Result

Variables	**Augmented Dickey-Fuller Test**					
	Level			**First difference**		
	Model I	**Model II**	**Model III**	**Model I**	**Model II**	**Model III**
LNGDP	0.8666	0.7761	0.9938	0.05**[b]	0.2651	0.1082
LNINTDEBT	0.2772	0.4776	1.0000	0.00***[b]	0.00***[b]	0.03**[b]
LNEXTDEBT	0.3085	0.4883	0.9370	0.00***[b]	0.02**[b]	0.00***[b]
LNDEBTSER	0.2217	0.1347	0.1243	0.00***[b]	0.00***[b]	0.00***[b]

, **, * represent significance levels at 10%, 5%, and 1% respectively.* ***a*** *and* ***b*** *represent the order of integration i.e. I (0) and I (1), respectively. The model I, II, and III are unit root with intercept, intercept and trend, and without intercept and trend respectively.*

Source: computation from Eviews 9 2018

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Philip-Perron Test Result for Unit Root

Variables	Phillips-Perron Test					
	Level			First difference		
	Model I	Model II	Model III	Model I	Model II	Model III
LNGDP	0.9786	0.7564	1.000	0.05**[b]	0.2651	0.1391
LNINTDEBT	0.3487	0.5972	0.9999	0.00***[b]	0.00***[b]	0.05**[b]
LNEXTDEBT	0.1285	0.3965	0.9027	0.00***[b]	0.02**[b]	0.00***[b]
LNDEBTSER	0.2696	0.1145	0.1312	0.00***[b]	0.00***[b]	0.00***[b]

, **, * represent significance levels at 10%, 5%, and 1% respectively.* ***a*** *and* ***b*** *represent the order of integration i.e. I (0) and I (1), respectively. The model I, II, and III are unit root with intercept, intercept and trend, and without intercept and trend respectively.*

Source: computation from Eviews 9 2018

The ADF and PP unit root test in table 4.3 and 4.4 show the result for both the level and differenced form. The order of integration indicates the number of times a series is differenced to be stationary. The optimal lag length was selected using the Schwarz Information Criterion (SIC) and a maximum lag of 7. From the ADF test result, all variables are not stationary in their level form. However, in their first difference, they are rendered stationary. This result is consistent with the PP test result as all the series are integrated of order one i.e. I(1).

Cointegration test

Cointegration test is used to detect or check for the presence of long-run equilibrium between or among series. Since it has been established that all variables are not stationary at the level, there is need to check whether there is the existence of similar trend properties between or among the series as a regression model on co-integrated series is said to be super consistent. Thus, given the unit root test result below, the most appropriate cointegration test is the Pesaran Bounds test since the test allows the combination of fractionally integrated variables i.e. combines variables of different orders of integration. The Bounds Cointegration test result is provided in the table below:

Co-integration Results- ***ARDL Bounds test***

Test Statistic				
F-statistic	6.18			
Critical Value Bounds				
Significance	10%	5%	2.5%	1%
I(0)	2.72	3.23	3.69	4.29
I(I)	3.77	4.35	4.89	5.61

Source: computation from Eviews 9 2018

Using the ARDL bounds test, the result above shows that with the assumption of weak exogeneity on RGDP, INTD, EXTD and DBTS there is a long-run relationship between RGDP, INTD, EXTD and DBTS. In fact, the hypothesis of no long-run relationship is rejected even at 1% significant levels as the test F-statistic I greater than the 1% I (1) bounds of 5.61.

Following this result, this study examines and estimates both the short-run dynamics and the long run relationship between RGDP, INTD, EXTD and DBTS.

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Model Estimation Result

This subsection presents the result obtained from estimating the ARDL unrestricted error correction (short run or dynamic) and the ARDL long-run (static) model in the previous chapter.

Short Run (Dynamic) Model Result

Variables	Coefficient	Std Error	T-stat	Prob.
D(LEXTDEBT)	-0.018251	0.011873	-1.537181	0.1392
D(LINTDEBT)	-0.021892	0.038714	-0.565484	0.5777
D(LDEBTSERV)	-0.024431*	0.008613	-2.836639	0.0099
D(@TREND())	-0.023030*	0.007648	3.011132	0.0067
CointEq(-1)	-0.185297**	0.086022	-2.154068	0.0430

* ** *** *indicate significance at 10%, 5% and 1% critical level respectively.*

$R^2 = 0.998$

Adj $R^2 = 0.997$

F-Stat = 1262.664

Durbin-Watson Stat = 1.921690

Source: computation from Eviews 9 2018

The short run model in the table above shows that external debt at -0.018251 and internal debt at -0.021892 have a negative relationship with the gross domestic product and they are statistically insignificance to the economic growth. By implication as external debt and internal debt reduces the gross domestic product has no effect on economic growth. It further shows that debt service at -0.024431 which is negatively related but statistically significant. Which means it will have a positive effect on economic growth. The result further indicate that apart from the serial dependence of gross domestic product , a 1% decrease in external debt leads to a cumulative effect of about 0.018% decrease in gross domestic product while a 1% increase in external debt leads to a cumulative effect of approximately 0.018% increase in gross domestic product in the short run. In the same vein, a 1% increase (decrease) in internal debt leads to a 0.021% decrease (increase) in the gross domestic product while a 1% increase (decrease) in debt service leads to increases (decreases) gross domestic product in Nigeria by 0.024% in the short run. The Error Correction Coefficient above indicates the speed of adjustment from the short-run dynamics to long-run equilibrium is 18.5%. In other words,18.5% means that the present value in GDP adjusts rapidly to previous changes in external debt, debt and debt service.

Long run (static) Model Result

Variables	Coefficient	Std Error	T-stat	Prob.
D(LEXTDEBT)	0.134045	0.105173	1.274523	0.2164
D(LINTDEBT)	-0.532117**	0.225488	-2.259635	0.0346
D(LDEBTSERV)	-0.208849***	0.115263	-1.811934	0.0843
C	11.692840*	0.838367	13.947157	0.0000
@TREND	0.124289*	0.029275	4.245593	0.0004

* ** *** *indicate significance at 10%, 5% and 1% critical level respectively.*

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Source: computation from Eviews 9 2018

Turning to the long-run result reported in the table above, it shows that internal debt and debt service are negatively related to the gross domestic product but are statistically significant. A percentage increase in internal debt and debt service consecutively means that GDP decline by -0.531 and -0.2088 respectively. By implication, as internal debt and debt service reduces, the gross domestic product has an effective change in economic growth. This implies that internal debt and debt service are beneficial to Nigeria economy. External debt exerts positive pressure in relation to the gross domestic product but not statistically significant. This implies that external debt as reduces, the gross domestic product also reduces.

The Adjusted R^2 value of 0.998 indicates that 99.8% variation in economic growth is explained by external debt, internal debt and debt service, the remaining 0.2% could be attributed to the stochastic error term not included in the model. The F-Statistic which is less than 0.05 confirms that the estimated model in table 4.5 and 4.6 are significant and valid.

Recommendation

The implication of the above findings is that the external debt does not play an important role in the development process of Nigeria and has been unproductive in terms of its contribution to the Nigerian economic development due to mismanagement and embezzlement of public funds, corruption and challenges of debt sustainability. The servicing of external debt is detrimental to Nigeria as funds that should have been put into investment in the economy are been used in servicing the debt. Hence, external debt is no means through which the growth and development of the country can be stimulated. On a normal status quo understanding, the accumulation of internal debt contributes significantly in the growth and development process of the nation as it increases the level of government expenditure in the economy leading to a rise in aggregate demand, output and employment. Literarily, it was discovered in this finding, as internal debt decreases, the economic growth begins to be vibrant.
However, the servicing of domestic debt impedes on the growth and development in the economy but at a reducing rate of debt servicing the economic growth is relieved against the burden of its improvement.

Based on the findings of this study, the following recommendations are made:

I External debt does not play an important role in the development process of the Nigerian economy and has been unproductive in terms of its contribution to the real Gross domestic product of the country. Hence, the government should reduce the level of external debt it accumulates over time.

II On a normal status quo understanding, the accumulation of internal debt contributes significantly in the growth and development process of the nation as it increases the level of government expenditure in the economy leading to a rise in aggregate demand, output and employment. It is discovered in this finding, as internal debt decreases, the economic growth begins to be vibrant.

III The government should as a matter of urgency begin the process of diversifying its economic base to avoid over-reliance on external and internal debt borrowing to finance its deficits since both the servicing of external and internal debt hinders the growth and development of the nation.

IV Proper macroeconomic management of the economy as a whole is important since it also determines the volume and servicing of public debt, as well as the credit rating.

V Availability of external finance should be consistent with a policy framework that is credibly maintained (fiscal stance, exchange rate policy, interest rate policy, pricing policy, etc.). It is important to create credibility including political will in order to spur investor confidence for both local and foreign investments.

VI Nigeria should also consider investment in the human resource as this can be the best alternative to internal debt in the long run. Optimal use and extraction of domestic mineral resources should be ensured to reduce import.

VII Nigerian government should interfere in the international market of export and import to control foreign exchange reserve. To make the debt service optimum, the debt policy might be revised.

VIII The government should ensure economic and political stability in order to enjoy the benefits of external debt and make the debt burden minimal.

IX Government should acquire public debt largely for economic reasons rather than social or political reasons. This would increase the productivity of the nation.

X Government should press for permanent debt relief so as to avert debt overhang problem.

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