DEBT AND DEBT SERVICE: IMPLICATIONS ON NIGERIAN ECONOMIC DEVELOPMENT

K. E. Uma ¹, F E Eboh ², P. C. Obidike ³

¹ Department of Economics, Federal University, Ebonyi State, 
² Department of Management, & ³ Department of Banking and Finance, 
Abia State University, Uturu, NIGERIA.

¹ kaluskyebng@yahoo.com, ² Ezionye_eboh@yahoo.com, ³ pcobidike@gmail.com

ABSTRACT

The study is an empirical investigation of the influence of total domestic debt, total external debt cum servicing of external debt from 1970-2010 on the economic development of Nigeria. The required data was sourced from Central Bank of Nigeria Statistical Bulletin and World Bank data bank. The study started with the battery test of stationarity of time series data using Augmented Dickey-Fuller test and Johansen test for co-integration to ascertain the long-run relationship of the variables. Ordinary least square was used to analyse the data. The results show that total domestic and total external debts are inversely related to real gross domestic product, a proxy for economic development, but at an insignificant level. Interest on total external debt relates positively on real gross domestic product contrary to our expectation but at an insignificant level. On this basis, we made the following recommendations, among others: The government must be sincere and focus more on internally generated revenue to finance development projects until all the debts and its interests are finally settled. It is imperative for the government to cut down cost of government with the intention to promptly redeem loans repayment and its servicing. The government has to diversify the economy as there are many sectors that need to be developed so as to generate more revenue and avoid opting for loans as the best alternative.

Keywords: Domestic debt, External debt, Interest on external debt, economic development

INTRODUCTION

Developing countries are often confronted with no other option but to take either domestic or foreign loans to enable the financing of developmental projects. There is a problem of capital in Nigeria due to low saving, low investment and low productivity (Onwumere, 2010), so when a country lacks the necessary resources for optimal development, one of the alternatives is borrowing. In some cases, it is because the period of intended expenditure does not synchronise with the time of receipt of revenue from the major sources of revenue generation, which is taxation. In Nigeria one of the major sources of Federal Government revenue has been the oil sector which gives about 95% of foreign earning and 80% of budgetary revenue. Nigerian’s inability to diversify the economy has made it impossible to generate adequate revenue to sustain the entire economy. Besides, improper management of resources, the problem of corruption, among others, have contributed to lack of provision of basic infrastructure such as good road network, pipe born water, electricity and so on.
Nigeria has made various efforts over the years to solve the problem of external debt management and so she adopted strategies involving refinancing, restructuring, buy back, collateralisation, debt conversion arrangements and different external borrowing guidelines. Actually, the domestic loans represent the gross liability of government, which also includes federal, state and local governments’ transfer obligations to the citizens and corporate firms within the country. Domestic debt consists of securitised loans such as Treasury bills, and Certificates, Development Stocks, Treasury Bonds and state government bonds as well as unsecuritised loans such as public sector debt to banks and local contractors (Odozi, 1996).

This intention of sourcing any loan is aimed at achieving some macroeconomic objectives of stability and growth of the economy. Government actually needs to intervene to guard against instability which is costly to the living standard of the people. A major way to finance intervention programme is by borrowing internally or externally. Loans obtained in this way are government revenue. The payment and servicing of such loans are public expenditure. Sanusi (2003), notes that the rising debt situation in Nigeria is highly associated with critical impediments to the desired path to economic growth and development. The cost of servicing public debt (domestic and external) may expand beyond the capacity of the economy to cope, thereby impacting negatively on the ability to achieve the desired fiscal and monetary policy objectives. A rising debt burden may constrain the ability of government to undertake more productive investment programmes in infrastructure, education and public health. Sanusi, therefore advised that to avoid such a situation, it is imperative that the quantum and structure of the nation’s debt be carefully managed in a manner that is consistent with the country’s growth and development aspirations. In this regard, it is imperative that effort is made in delving into alternative sources of acquiring funds for development so as to minimise taking of loans. The associated problem of payment of principal and servicing of loan culminated in reduction of virtually various types of infrastructure in Nigeria.

Prior to the establishment of Debt Management Office (DMO), the management of external debt has been under the control of Central Bank of Nigeria. The increasing responsibility led to the establishment of a special department in collaboration with the Federal Ministry of Finance for debt management. The Debt Management Office in Nigeria was instituted on 4th October, 2000 with the intention to have a central co-ordination of debt. The establishment of Debt Management Office was aimed at the attainment of some objectives which include the following: Good debt management practices that make positive impact on economic growth and national development, particularly in reducing debt stock and cost of public debt servicing in a manner that saves resources for investment in poverty reduction programs; Prudently raising financing to fund government deficits at affordable costs and manageable risks in the medium and long-term; Achieving positive impact on overall macroeconomic management, including monetary and fiscal policies; Consciously avoiding debt crisis and achieving an orderly growth and development of the national economy; Improving the nation’s borrowing capacity and its ability to manage debt efficiently in promoting economic growth and national development; Projecting and promoting a good image of Nigeria as a disciplined and organised nation, capable of managing its assets and liabilities and providing opportunity for professionalism and good practice in nation building (Oke & Sulaiman, 2012; http://www.dmo.gov.ng/backgroundb.php)

Loans in Nigeria have been on the increase over the years because of Federal Government reliance on loans from both domestic and foreign sources to finance its budget deficits. For instance, domestic total debt rose from ₦33.295.2 million in 1987 to ₦43,535.7 million in 1988 and by 1989, it stood at ₦43,555.7 million, while external public loans rose from ₦
85,042.2 in 1987 to ₦111,706.4 million in 1988 and in 1989, it was ₦179,698 million (CBN, 1989). Besides, CBN (2009) points out that in 2004, domestic loan of Federal Government stood at ₦1,370,320.5 million and rose to ₦1,525,910 million in 2005, ₦1,753,250 in 2006, and rose to ₦2,169,630 million in 2007; by 2008 and 2009, it was ₦2,320,310 and ₦3,228,030 respectively. External debt was continuously rising but began to fall from 2005 when Nigeria got debt relief. Actually, external borrowing has been taken as a panacea for closing the gap between saving and investment. This increase in external debt has raised debt servicing, which takes a large chunk of Federal Government expenditure. It has also been argued that the huge rise in total expenditure for debt service payment was as a result of low domestic investment which suppose enhance growth and development (Obadan, 1991).

Oke and Sulaima (2012) point out that developing countries contracted large amounts of debts often at highly concessional interest rates particularly in the 1970s. It was believed that such loans would place the countries at faster development path through higher investment and faster growth. But as debt service ratios rose very high in the 1980s, it became obvious to many of the indebted countries that debt repayment, apart from imposing as a constraint to economic performance in their countries, but would be virtually impossible to repay back these loans and leave a favourable balance to support their domestic economy. Government positive intention of borrowing to meet fiscal responsibility often becomes a source of decline in economic development. Cambell (2009) posits that government debt can quickly become a burden on the economy and weakens its foundations and advocates that policymakers must recognize that accumulating debt also accumulates risk by increasing the claims on yet unrealized future income. The country has paid huge amount of money for loans and interest. Adenike, Adekunle and Abiodun (2007) note that Nigeria has been paying approximately $1 billion annually to Paris club creditors and $0.8 billion to other multilateral and commercial creditors. Besides, Nigeria has never met up with US $3 billion debt services required to be paid to creditors every year. This resulted to the accumulation of arrears coupled with penalty charges which continuously increase the total debt stock. Macroeconomic objectives are frequently being distorted from attention on loan servicing thereby thwarting development intention. One may ask to what extent have debts impacted on Nigerian economy over the years? This work intends to unravel the effect of both domestic and external debts in Nigeria economic development.

In this study, the main objective is to investigate the influence of debts and servicing of debts on the development of Nigeria economy. Specifically, it is our intention to examine the effects of total domestic debt, total external debt and total interest rate on external debt on the economic development of Nigeria.

We intend presenting the work in this order, section one is the review of related literature, section two will dwell on model formulation/specification, method of data analysis, battery and diagnostic tests, while recommendations and conclusion will be the last section.

REVIEW OF RELATED LITERATURE

Many scholars have discussed various approaches of revamping a developing and depressed economy. In Nigeria, since over 50 years ago, borrowing has constituted a recurring approach and has in different ways brought in capital but has also been a source of worry because of the interest rate payment which retards public expenditure in repositioning the economy. Unequivocally, the growth and development of a country depend greatly on the level of investment. Investment on its own involves huge sum of saved capital which is not easy for a developing country to realise. The inability to have the essentials of development
requirements calls for borrowing. Audu (2004) points out that debt overhang is the major factor that has contributed largely to the poor performance of the Nigeria economy. The debt service burden has militated against the country rapid economic development and worsens the social problems. Service delivery by key institutions designed to mitigate the living conditions of vulnerable groups were hampered by decaying infrastructure due to poor funding. Really, all these have retarded development efforts apart from leadership styles of those at the helm of affairs in Nigeria over the years.

Scholars have noted that external loans are supposed to assist rapidly in raising the growth of an economy given that the available domestic resources are not adequate to take care of growth needs (Oloyede, 2002; Hameed, Ashraf and Chaudhary, 2008). However, the opted approach of external borrowing with concessional interest brought in capital and the extent of its utilisation for productive assets considering corruption gives room for doubt about the efficient use of such loans.

Actually, economic development is said to have secured if over time, a progressively higher percentage of the population shares the fruits of economic growth. However, economic development which is synonymous to development can be stated as a process of prolonged and sustained growth in the real national income of a country, accompanied by positive changes in the economic, social and political structures of the economy with the result that the real income per capita of the people increases over a long period of time, subject to the stipulation that the number of people below the poverty line do not increase, and the distribution of income does not become more unequal and a sustainable environmental development (Okoyes, 1979:8; Chigbu, 1996). Loan obtained in Nigeria are aimed for development, but the deficiency of major growth capital overheads like power supply, learning equipment, poor road network, among others, and the high level of poverty which has been on the rise gives room for questioning the impact of developmental efforts.

Actually, there have been numerous studies on debts and debt related issues on the economic development/growth of an economy or economies. The results often vary, but sometimes agree with each other. Oke and Sulaiman (2012) examined the impact of external debt on the level of economic growth and the volume of investment in Nigeria between 1980 and 2008 using Debt cum growth model focusing on econometric analysis method of multiple regressions. Their finding showed the existence of positive relationship between external debt, economic growth and investment. The study also revealed that the current external debt ratio of gross domestic product stimulates growth in the short term and the private investment which is a measure of real and tangible development shows a decline. Suffice it to note that the period of servicing of loan is the beginning point of adverse effect of loans; especially if loans are not invested in tangible productive venture that can take care of itself. Non-servicing of loans based on agreement has a price in form of penalty.

Ajayi and Oke (2012) investigated the effect of external debt on economic growth and development of Nigeria employing ordinary least square method of data analysis and found that external debt burden had an adverse effect on the national income and per capita income of the nation, and high level of external debt led to devaluation of the nation currency, increase in retrenchment of workers, continuous industrial strike and poverty. In the same vein, Sulaiman & Azeez (2012) studied the effect of external debt on the economic growth of Nigeria. They employed the method of ordinary least square and error correction model to ascertain the long run relationship of the endogenous and exogenous variables chosen. Their findings revealed that the external debt has contributed positively to the Nigerian economy. On the contrary, Audu (2004) examined the impact of external debt on economic growth and
public investment in Nigeria from 1970-2002 using ordinary least square method. The result revealed that the external debt service has a negative impact on economic growth and there is a negative correlation between external debt overhang and public investment.

Adenike, Adekunle and Abiodun (2007) reviewed the roles of debt management practices on sustainable economic growth and development with particular emphasis on Nigeria. The analysis of the data collected with descriptive statistics shows that, availability of access to external finance strongly influences the economic development process of any nation. Debt is an important resources needed to support sustainable economic growth. But a huge external debt without servicing as it is 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.

Ogiemudia and Ajao (2012) studied the effect of foreign debt management on sustainable economic development with specific emphasis on Nigeria over the period 1979-2009 using ordinary least square method of data analysis and error correction model to ascertain the long-run relationship of established model. Their finding showed that access to external finances strongly influence the economic development process of Nigeria and other countries. The study further revealed that there is a significant relationship between external debt and economic development in Nigeria while debt servicing had a negative but insignificant effect on Nigeria.

Udoka and Anyingang (2010) evaluated the relationship between external debt management policies on the economic growth of Nigeria from 1970-2006 using ordinary least square method. The empirical result shows that, GDP, exchange rate, fiscal deficit, London Interbank offered rate, and terms of trade are the major determinants of external debt in Nigeria. They further pointed out that the severity of the debt within the period is reflected in the country’s inability to meet the debt service obligations particularly scheduled debt services in relation to its foreign currency earnings, it explains why the country had rescheduled its debt from time to time (first in 1986, 1989, 1991, and last in October 2000).

Abbas and Christensen (2007) examined the role of domestic debt markets in economic growth: an empirical investigation for low-income countries and emerging markets using panel econometric techniques to examine the endogeneity of domestic debt and its impact on growth with a view to obtaining a sense of the optimal size and quality of domestic debt. They found the following, among others: higher private savings increase the scope for domestic debt issuance while a larger supply of domestic debt instruments provides incentives to increase private savings. But, financial depth had a surprisingly weak causal contribution to income and the growth contribution of domestic debt is higher if it is marketable, bears positive real interest rates and is held outside the banking system.

Both domestic and external loans have desirable advantages if properly managed. It has the capability of achieving desirable impact in the growth and progress of a developing economy if investment of loans in productive activity is strictly made to service and repay loan principal. It is also a way of forced saving when private or public loans are judiciously managed.

**MODEL SPECIFICATION/FORMULATION**

It is our belief that domestic and external loans have the ability to encourage investment in Nigeria, which will lead to increase in the use of resources of the country and thereby increase aggregate economic activity, measured by real gross domestic product. In other words, production in Nigeria is expected to rise due to loan use and so the payment or
servicing of loan has no adverse effect if and only if investment of loans is yielding sufficient revenue. However, debt can become a problem due to improper management and as such affect economic development when the payment of the principal and its servicing impede public expenditure on development. Be that as it may, we can state that total domestic debt (tdd), total external debts (ted) and interest rate on total external debt (ited) are functionally related with the real gross domestic product (rgdp). Mathematically, the functional form of the relationship can be stated thus:

\[ R_{gdp} = f(T_{dd}, T_{ed}, I_{ed}). \]

That is \( R_{gdp} = b_0 + b_1 tdd + b_2 ted + b_3 ited + e_t \)

Where: \( R_{gdp} = \text{Real gross domestic product}; \)
\( T_{dd} = \text{Total domestic debt}; \)
\( T_{ed} = \text{Total external debt}; \) and
\( I_{ed} = \text{Interest on total external debt}. \)

Also, \( b_0 \) is the intercept denoting the effect on real gross domestic product when the explanatory variables are held constant; \( b_1, b_2 \) and \( b_3 \) are the coefficients of the independent or the explanatory variables and \( e_t \) is the stochastic error term. On a priori basis, the coefficient of the explanatory variables \( (a_1, a_2, \) and \( a_3) \) are expected to have negative relationship with real gross domestic product (a proxy for economic development). This is on the ground that the compounded problem of debt management is expected to adversely reduce aggregate economic activity reflected by the real gross domestic product.

METHOD OF DATA ANALYSIS

In this study, we intend to employ the method of ordinary least square as used by Ajayi and Oke (2012). But we hope to examine the long-run relationship of the endogenous variable (rgdp) and exogenous variables (tdd, ted, ited). It is necessary that we start by examining the feature of time series data and so we test for unit root using Augmented Dickey-Fuller test for stationarity. Johansen co-integration test for long-run relationship will be performed and possibly employing the method of Error Correction Model (ECM) if need be. Data for this study were sourced from Central Bank of Nigeria Statistical Bulletin and Word Bank data bank.

UNIT ROOT TEST

There are varieties of approaches for investigation of an important property (that is random walk) of time series data. Unit root test is necessary to guard against analysis of spurious relationship of variables. Non stationarity variables will produce spurious results if used in analysis: that is, result that is not valid for forecasting or prediction. In this work, we used the most popular unit root test, which is Augmented Dickey-Fuller (ADF) test.

The Augmented Dickey-Fuller test involves rejecting a null hypothesis of unit root (the series are non-stationary) and acceptance of the alternative hypotheses of stationarity of a given variable(s). The null hypothesis is that the variable under investigation has a unit root against the alternative that it does not. The decision rule is to reject the null hypothesis if the absolute value of the Augmented Dickey-Fuller (ADF) statistic exceeds the critical value at a chosen level of significance.

The results of table one shows that real gross domestic product (rgdp) and total external debt (ted) are stationary at first difference considering the Augmented Dickey-Fuller (ADF)
statistic for each variable, which the absolute value is greater than the critical value at 1%, 5% and 10%, respectively. Total domestic debt (tdd) and interest on external debt (ited) are stationary at level form.

Table 1. Showing the result of unit root test

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Statistic</th>
<th>Critical value at 1%,5%,10%</th>
<th>Order of integration</th>
<th>Unit root</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDD</td>
<td>-8.063460</td>
<td>-3.6067 2.9378 2.6069</td>
<td>I(0)</td>
<td>Stationary</td>
</tr>
<tr>
<td>TED</td>
<td>-4.372614</td>
<td>-2.9399 2.6080 3.6067</td>
<td>I(1)</td>
<td>Stationary</td>
</tr>
<tr>
<td>ITED</td>
<td>-3.143804</td>
<td>-2.9378 2.6069</td>
<td>I(0)</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

The absolute values of the ADF statistic of both variables are higher than the critical value at 1%, 5%, and 10%. So, considering the nature of stationarity of the variables, it is pertinent to ascertain if there is long run relationship between the dependent variable (rgdp) and total external debt since both are integrated of the same order. Hence, we proceed to test for co-integration using Johansen co-integration test.

Table 2. Johansen Co-integrating Test Result between RGDP and TED

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Likelihood ratio</th>
<th>0.05 (%5) critical value</th>
<th>1% Critical value</th>
<th>Hypothesized No of CE (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.218689</td>
<td>10.96257</td>
<td>15.41</td>
<td>20.04</td>
<td>None</td>
</tr>
<tr>
<td>0.033727</td>
<td>1.338052</td>
<td>3.76</td>
<td>6.05</td>
<td>At most 1</td>
</tr>
</tbody>
</table>

*(***) denotes rejection of the hypothesis at 5% (1%) significance level. L.R. indicates rejects any co-integration at 5% level of significance

The result confirms no evidence of co-integration, given that the Eigenvalue and Likelihood ratio is less than the critical value at 5% and 1%, and so we conclude that there is no long run relationship between the real gross domestic product and total external debt. Hence, we progress to run the regression at the order of integration.

Table 3. Showing Regression result: Dependent variable D Log (RGDP,2)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Co-efficient</th>
<th>Standard error</th>
<th>t-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLog(TDD)</td>
<td>-0.136749</td>
<td>0.467131</td>
<td>-0.292742</td>
<td>0.7714</td>
</tr>
<tr>
<td>DLog(TED,2)</td>
<td>-0.149603</td>
<td>0.122973</td>
<td>-0.216556</td>
<td>0.2319</td>
</tr>
<tr>
<td>DLog(ITED)</td>
<td>0.057520</td>
<td>0.067150</td>
<td>0.856601</td>
<td>0.3975</td>
</tr>
<tr>
<td>C</td>
<td>0.027878</td>
<td>0.121715</td>
<td>0.229045</td>
<td>0.8202</td>
</tr>
<tr>
<td>R-squared</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durbin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watson</td>
<td>2.756055</td>
<td>0.5235</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The coefficients of total domestic debt (TDD) and total external debt (TED) are negatively related to real gross domestic product (RGDP) but these are at statistically insignificant level as shown by the probability values of the variables respectively, which are greater than 5% significant level. The inverse relationship of the coefficients of TDD and TED meet our apriori expectation as they influence negatively on the development of Nigeria economy. The result is in line with Adenike, Adekunle and Abiodun (2007) who pointed that a huge external debt without servicing as it is 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. The interest on external debt (ITED) has a positive relationship with the dependent variable, although it is insignificant but it is contrary to our expectation. It is our belief that servicing of external debt retard expenditure on infrastructural provision, hence impacting adversely on development. The R-squared shows a poorly fitted of the regression line, which denotes that there are other variables excluded which have more impact on real gross domestic product. However, there is no evidence of autocorrelation considering the Durbin Watson statistic value. The joint impact of the explanatory variables on the dependent variable is statistically insignificant as shown by the F-statistic and the probability of the F-statistic.

RECOMMENDATIONS

In consideration of the outcome of our data analysis, we make the following recommendations. Frantic efforts are required to settle all outstanding debts. Any loan should be channelled into productive venture that can pay and service itself until it is finally settled. There is urgent need for the legislature to come up with laws to guide sourcing, management and limit of loan-taking by the federal government of Nigeria. Staff of the Debt Management in Nigeria should be men of integrity to avoid corrupt practices. The government must be sincere and focus more on internally generated revenue to finance development projects until all the debts and its interests are finally settled. It is imperative for the government to cut down cost of government with the intention to promptly redeem loans repayment and its servicing. The government has to diversify the economy as they are many sectors that need to be developed so as to generate more revenue and avoid opting for loans as the best alternative. Government should make more efforts to attract foreign direct investment as a panacea for developmental capital.

CONCLUSION

In this paper we have examined the impact of debts on the economic development of Nigeria over the years. It is obvious that loan at the initial stage boasts an economy but as the period for principal repayment and servicing is reached, it becomes a problem, especially if the acquired debt is not tied down to any productive venture. In Nigeria, the situation has been critical as debt problem caused by different governments over the years have retard aggregate economic activity due to diversion of developmental funds to payment of interest on loan, charges on loan default, among others. This study has shown that debt situation over the years has not been favourable to the development of Nigerian economy, and this is among the reason the Paris club gave debt relief to Nigeria in 2005. The damage caused by debt is reflected by lack of sufficient resources allocation to interdependent sectors that play significant role for economic development, thereby affecting living standard. Given that every problem has a solution and so, we are convinced that a positive change can take place if our recommendations are strictly adhered to by the policy makers.
REFERENCES


