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THE NIGERIA DEBT STRUCTURE AND ITS EFFECTS ON ECONOMIC PERFORMANCE

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ABSTRACT: *The aim of this study is to verify the empirical relationship between the structure of Nigeria public debts and the nation's economic performance over the period 1990-2015. The study employ relevant data from CBN statistical bulletin of various issues and the analysis are based on two regression techniques simple and multiple. The simple regression result indicates significant positive relationship at 0.05 level between aggregate public debt and Nigeria GDP. Multiple regression analysis indicate that while the multiple correlation coefficient is significant at 0.05 level, external debt in negatively signed while domestic debt signs positively with Nigeria's GDP. The regression coefficients are all significant at 0.05 levels with a coefficient of determination (R^2) value of 94.5 percent. Given the result, the study concludes that Nigeria public debts are valuable in predicting partially variations in Nigeria's economic performance. It recommends that Nigeria should emphasis more of domestic debts in place of external debts. This should be done through development of new and varied money and capital markets products as well as enhanced internationalization of the operations of the Nigeria's capital and money markets. It also recommended that development of indigenous technological potential be given priority to boost Nigeria technology and eventually economic independence.*

KEYWORD: Domestic debt, external debt, debt structure and economic performance.

INTRODUCTION

The question here is whether the public debt incurred by Nigeria which consists of domestic and external debts are of any consequence to the economy. Although the study does not any way, attempts to address the issue of optimal mix of domestic and external debts that will maximize economic performance in Nigeria, however, it will largely evaluate the implication to the Nigeria economy of the current structure of the prevailing public debts. The traditional finance theory as indicated by Solomon (1963), Western (1963), Lintner (1963) Posit that leverage is desirable for corporate growth irrespective of contrary opinion expressed by Modigliani and miller (1958) and (1965). The economy would however be better off with an appreciable mix of both domestic and external debts provided that the value of goods and services produced through debts financing, exceeded the costs of such debt. This position vests on the basis that interest charges and administrative expenses on borrowed funds is less than the operating earning. When extended to the macro-economy, operating earning approximate the value of goods and service generated in the economy.

Debt accumulation is said to be beneficial if it promotes economic growth and welfare of the citizens. However, Smith and Todaro (2009) extensively argued that were debts are poorly managed, especially in the less developed countries, the attended debt burden could be severe and distractive with significant negative socio-economic implications. Leverage desirability theoretically emanates from the financial and economic opportunities if government of

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developing countries use it to finance socially and economically desirable public sector projects. These include but not limited to electricity and power supply, transportation and health care delivery services etc. These facilities are essential for the accelerated development of both public and private sectors of the developing economics.

Statement of Problem

The discussion of public debts in this study could be classified into three viz.

- Attempt to evaluate the socio-economic factors which influence debt accumulation by nations.
- Appraisal of debt management techniques of specific countries and
- The influence of debt on the economic performance of nations.

Arising the above Jhigan (2008) argued that less developed countries borrow to accelerate economic development through the import of capital goods, spare parts, raw materials, etc. he further asserted that developing nation's also borrow to finance certain consumer requirement of their growing population considered as strategic for the achievement of the objective of economic growth and development of these countries. In his own contribution, Isu (1997) argued that the Western Traditional causants theory was grossly inappropriate to explain Nigeria debt accumulation. Akujuobi (20O7) concluded that external debts contributed negatively to Nigeria's economic growth as opposed to domestic debt which contributed positively to Nigeria's economic growth. While the debate on the relevant explanatory variables for predicting national public debts continues, it is important to mention that country specific debt burden could differ in terms of the causative factors and the influences of the domestic and external debts on the affected economies. Although it has been often acclaimed that the growth rate of the Nigerian economy in the recent times hovered between 4% and 6% range per annum, studies are still scanty on the structural analysis of Nigeria's debt and its consequences on the growing economy, and this constitute the gap which this study need to fill this is the direction of the main trust of this study.

Purpose/Objective of the Study

This study aims at contributing to the existing literature on public debt in Nigeria. Specifically it seeks to evaluate the structural influence of public debt on Nigeria economic performance proxy by GDP at current market price. This paper will examine specifically, the extent to which variations in Nigeria debt structure contributed to the nation's economic growth.

Significant of the Study

1. To the Policy Makers: the study would be useful to policy makers because of the possible implication of the result for policy decision.
2. To the Academia: the study will add to the existing body of knowledge.
3. To the General Public: the study will be useful to the public as a reading material for academic discourse.
4. To the Students: it provides an avenue to the students for further research.

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Research Hypothesis

In carrying out the study we formulate the following hypotheses which are conventionally stated in their null (Ho) form as follows:

Ho_1: There is no relationship between Nigeria gross domestic product (GDP) and public debt incurred.

Ho_2: There is no relationship between Nigeria gross domestic product (GDP) and the structure of the public debts.

Decision Rule: for each hypothesis, the decision rule is to reject the null hypothesis and accepts the implied alternate calculated test statistics is significant at 0.05 level. The SPSS software will be applied for the analysis.

LITERATURE REVIEW

The tradition school of thoughts in finance and economic view leverage as essential for corporate growth. However since the great depression of the late 1920's and early 1930's when the Keynesian deficit policy propelled the economies of Western Europe out of depression, public debt (deficit) has been recognized as a veritable instrument for raising aggregate demand, employment and output of all economies both developed and developing. Public debt has consequently gained accelerated prominence among less developed countries. It is seen as a viable strategy for mobilization of the additional resources required to finance their much desired developmental needs. This financing strategy seems justifiable on the grounds that available savings at particular points in time have never matched their desired levels of investment. Jhingan (2008) argued that less developed countries are saddled with complex foreign debt problems, because as poor countries, they have low rates of domestic savings and consequently, investment. As a result, they heavily depend on capital inflows from abroad to finance their appraised developmental needs.

In his view, less developed countries significantly lack the essential economic and social overhead capital. They also lack the strategic industries such as iron and steel which are fundamental prerequisites for launching nations into the development process as opposed to the situation in the Soviet Union, where industrialization began on the platform of the iron and steel industries.

The above circumstances accordingly, made a strong case for incurring sometimes, external debts with stringent repayment terms. The repayment terms in turn, facilitate the conditions for debt crisis as a greater proportion of the export proceeds of debtor countries would continually be required to service matured external debts. Ultimately, accumulation of external debts leads the less developed countries into huge current account deficits. These deficits are financed by issuance of sovereign bonds by debtor countries, borrowing from foreign banks and international credit institutions as well as foreign private firms. The settlement of the bond obligations consequently imposes a serious debt burden on the less developed economies.

Onoh (2007) noted that domestic sources of Nigeria's public debt include borrowings from individuals and corporate bodies, other tiers of government, deposit money banks, non-bank financial institutions etc. The debts are raised through the issuance of instruments subscribed

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through the money and capital market. Remarkably, he noted that it was only during 2005 - 2007 fiscal years that Nigeria secured a substantial debt relief and debt restructuring from the Paris and London clubs under the Naple terms. Taking a political view of debt relief in Nigeria, Aina (2005) commented that Nigerian economy has been weakened and will continue to deteriorate on account of the neo-colonial forces of globalization. He stressed that Nigeria lacks the competitive advantage to engage the developed nations in any exchange process. Given this scenario, he viewed Nigeria as a victim of capital flight, mounting debt profile, industrial collapse, over dependence on imported goods, weak currency and high inflation rates. He argued that the country will continue to experience the adverse effects of globalization so long as she continued to open up her economy for external economic relationship. Further, he viewed Nigeria as having reduced access to the markets of the developed nations because of her disadvantaged technological position.

Providing a valuable framework for predicting Nigeria's external debt, Isu (1997) drew from scholars who include Killik, Mehran, Printo and Fajana and adopted the traditional primary causants model in evaluating the determinants of Nigeria's external debt. Among the five Western traditional causants-productivity index, inflation rate, foreign reserves, balance of payment on current account and population, he found only population as significant in Nigeria. Akujuobi (2007) evaluated the comparative influences of external and domestic debts on Nigeria's economy. The results indicated negative sign for external debt with insignificant regression coefficient at 0.05 level. Domestic debt showed a positive relationship with Nigeria's GDP and a significant regression coefficient at 0.05 level. The study called for drastic reduction in the value of external debts taken by Nigeria.

Ghebreyesus (2001) applauded the international credit institutions for granting some less developed economies debt relief. However, he asserted that adequate measures have to be put in place to ensure that the excess proceeds which will result from the debt concessions as well as subsequent borrowings would be properly applied in view of the attendant moral hazards prevalent in the less developed economies. He called for extraction of strong commitments from the managers of developing economies and strict monitoring by the international organizations. Nnanna et al (2004) contended that the growth of domestic and external debts negatively impacted on both investment and economic growth in Nigeria. Although largely descriptive, the study observed that internal debt had the effect of reducing incomes and savings while cutting down on domestic investible resources. External debt to them, cuts deep into Nigeria's exportearnings and consequently, discourages inflow of subsequent foreign investments.Also it reduces the country's capacity not only to effect the home remittances of foreign firms, but also, weakens the available quantum of foreign exchange required for expected imports. On the other hand, they argued that debt over-hang militates against domestic investment incentives. This is because local investors may tend to think that the anticipated benefits from their local ventures may be applied to servicing the country's external debts.

METHODOLOGY OF THE STUDY

Nigeria's public debt consists of domestic and external debts. Consistent with the objectives of this study, the gross domestic product is employed as proxy for economic performance in Nigeria. Based on the literature survey and existing empirical evidences on the subject, the models for this study are presented as follows;

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GDP = F (TD) …….eqn (1)

GDP = F (DD, EXD)…… eqn (2)

Where;

GDP = Gross domestic product

TD = Total debt

DD = Domestic debt

EXD = External debt

For estimation purposes, equation (1) and (2) are re-written as"

$GDP = \beta_0 + \beta_1 TD + e_i$…….. eqn (3)

Where;

GDP = Gross domestic product

β_0 = Constant term

β_1 = Regression coefficient for total debt

TD = Total debt

e_i = Error term and

$GDP = \alpha_0 + \alpha_1 DD + \alpha_2 EXD + e_i$ …….. eqn (4)

Where;

GDP = Gross domestic product

α_0 = constant term

α_1 = Regression coefficient for total debt

DD = Domestic debt

α_2 = Regression coefficient for external debt

EXD = External debt

e_i = Error term

Data Presentation

Table 1 below incorporates the data covering the period 1990-2015 which form the basis for the various analyses executed in this study;

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Table 1 Nigeria; Gross Domestic Product, Domestic Debts and External Debts (1990-2015)

Year	Gross Domestic Product (N'M) (GDP)	Domestic Debt (N'M) (DOD)	External Debt (N'M) (EXD)	Total Debt (N'M) (TD)
1990	47619.70	1,195.50	2331.20	13.527.70
1991	49,069.30	15,010.50	8819.40	23,829.90
1992	53,107.40	22,224.30	10577.70	32,802
1993	59,622.50	25,675.0	14808.70	40,483.7
1994	67,908.60	27,952.0	17300.60	45.252.60
1995	69,147.0	28,440.20	41,452.40	69,892.60
1996	105,22.90	36,790.60	100,789.10	137,579.700
1997	139,085.3	47,031.10	133,956.30	180,987.40
1998	216,787.50	47,051.10	240,393.70	287,444.80
1999	267,550.00	84,093.10	298,614.40	382,707.50
2000	312,139.80	116,200.10	328,453.80	444,653.90
2001	532,613.80	161,900.20	544,264.10	706,164.30
2002	683,869.80	261,093.60	633,144.40	894,238.90
2003	899,863.20	359,360.90	648,813.0	908,173.90
2004	1,933,211.60	248,774.50	716,865.60	965,640.10
2005	2,702,719.10	343,674.10	617,320.0	960,994.10
2006	2,810,972.60	359,029.20	595,931.90	954,961.10
2007	2,708,430.90	537,490.90	633,017.00	1,170.507.90
2008	3,194.023,60	794,806.40	2,577,374.40	2,372,180.80
2009	4,537,640.0	898,253.90	3,097,383.90	3,995,637.80
2010	4,685,912.2	1,016,976.00	3,176,291.00	4,193,267.00
2011	5,403,006.8	1,166,000.70	3,932,884.80	5,098,885.50
2012	6,947,819.9	1,329,680.00	4,478,329.30	5,808,009.30
2013	11,411.066.90	1,370,325.10	4,890,269.20	6,260,594.70
2014.	14,610,8815	1,525,906.60	2,695,072.20	4,220,978.80
2015	18,222,790.00	1,753,259.00	451,461.70	2,204,720.70

Source: Central Bank of Nigeria, Statistical Bulletin Various Issues.

ESTIMATION OF RESULT AND ANALYSES

Simple Regression Analysis Result

The summarized output of the computer program in respect of the first model which employed total debt as explanatory variable for Nigeria's gross domestic product is presented below, in table 2.

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Table 2: **Simple Correlation and Regression Result of Nigeria's Gross Domestic Product and Total Public Debt.**

Items	Unstandardised coefficients	t-values	Sig-t values
Constant	463062094	0.507	0.617
Total Debt	1.628	4.598	0.000

R= 0.684; R^2=0.468; F = 21.146; Sig f = 0.000

Source: Computer print-out.

The results in table 2 indicate a positive relationship between total public debts and Nigeria's gross domestic product which is as strong as 68.4 percent. Following Maddala (2007) and Norusis (2000), the unstandardised values for the regression coefficients are adopted because the gross domestic product and Nigeria's public debt are all measured in the same unit, naira. This implies that one unit change in Nigeria's aggregated public debt is associated with 1.628 unit changes in gross domestic product, which is significant at 0.000 level. At the same time, the coefficient of determination value R^2 of 0.468 indicates that variations in aggregated public debt account for 46.8, percent of variations in Nigeria's gross domestic product, while 53.2% of the variations in GDP was due to forces or factors outside the model. The overall regression has f-value of 21.146 which is significant at 0.000 level indicating a good line of fit.

To teat hypothesis 1, the linear relationship between Nigeria's GDP and total public debt is given by the simple correlation coefficient R. The R value as shown in table 2 above and automatically displayed by system is 0.684. The automated t-value of 4.598 is significant at 0.000 level. Since 0.000 is higher than the critical or minimum acceptance level of 0.05, therefore, the null hypothesis is rejected while the alternate hypothesis is accepted. This implies that there is a significant relationship between gross domestic product and aggregated public debt incurred by Nigeria.

Correlation Matrix Analysis:

The highlights of the relations between Nigeria's gross domestic product, domestic debt and external debt as variables of study are shown in table 3.1 below:

Table 3.1 **Correlation Matrix involving Nigeria's Gross Domestic Product, Domestic Debt and External Debt.**

Items	GDP	DOMESTIC	EXTERNAL DEBT
GDP	1.00	0.930	0.557
Domestic	0.930∗	1.00	0.787+
External Debt	0.557∗∗	0.787	1.00

∗ Significant at 0.000 level

∗ Significant at 0.002 level

+ Significant at 0.000 level

Source: Computer Print-Out

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The results indicate positive correlation coefficients of 0.930 between Nigeria's GDP and domestic debt, 0.557 between GDP and external debt and 0.787 between domestic debt and external debt. They are significant at 0.000, 0.002 and 0.000 levels respectively.

Multiple Regression Analysis Results

The results of the regression of Nigeria's gross domestic product as a function of the structure of Nigeria's public debt (domestic and external) are shown in table 3.2 below:

Table 3.2 **Multiple Regression Results of Nigeria's Gross Domestic Product, Domestic and External Debts.**

Items	Unstandardised coefficients	t-values	Sig-t values
Constant	- 483589.78	- 1.569	0.130
Domestic Debt	11.140	16.262	0.000
external Debt	- 1.421	-5.781	0.000

R= 0.972; R^2=0.945; f = 196.868; sig f= 0.000 DW = 1.191

Source: Computer Print Out

The multiple regression results indicate a multiple correlation coefficient as high as 0.972 between Nigeria's GDP and the structure of public debt. Domestic debt is positively signed. Nigeria's GDP has a sensitivity of 11.140 with respect to a unit change in domestic debt. Conversely, external debt is signed negatively while Nigeria's GDP exhibits a sensitivity of only 1.421 to it. This implies that a unit change in external debt is associated with 1.421 unit decline in Nigeria's GDP. The t-values for domestic and external debts are all significant at 0.000 level with a coefficient of determination as high as 0.945. This indicates a combined explanatory capacity: for- 94.5 percent of variations in Nigeria's GDP due to changes in the structure of public debt. With f-value of 196.868, which is significant at 0.000 level, they indicate a good line of fit also.

Table 3.2 also shows the results of the multiple correlation test. To test the significance of the relationship between the structure of public debt and changes in Nigeria's gross domestic product, (ie hypothesis 2) the multiple correlation analysis test was employed. The f-statistic is 196.686 which is significant at 0.000 level. Since it is above the minimum acceptance level of 0.05, the null hypothesis is rejected while the implied alternate hypothesis is accepted. Therefore, there is a significant relationship between Nigeria's GDP and the structure of public debts in Nigeria.

DISCUSSION OF RESULTS AND CONCLUSIONS

The results of this study indicate appreciable relationship between Nigeria's domestic and external debts. This trend is expected to continue because in practice, most large scale public and private sector project debts consist of local and foreign currency components. Of significance is the finding of consistent yearly growth in the two debt components over the period of study.

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Further this study reveals that Nigeria's public debt whether aggregated or structural in form is helpful in explaining changes in Nigeria's gross domestic product, and hence, economic performance of the country. However, it is vital to note that while domestic debts sign positively with Nigeria's gross domestic product, external debts sign negatively with it. The results contradict a-priori expectation of positive relationships based on theoretical postulation of the advantageous effects of leverage both at corporate and national levels, However, the results might probably have emanated from the fact that external debts are often associated with stringent repayment terms. They also embody other trade conditionalities which may turnout to be counter-productive and inimical to the growth of less developed economies. However, the results of this study have shown that changes in both domestic and external debts either in their aggregated or structural forms are valuable in predicting partially, the variations in Nigeria's gross domestic product and hence, economic performance.

The Implication of the Study

1. The study implicate that Nigeria public debt is helpful in explaining changes in Nigeria gross democratic product (GDP).

2. The study also implicate that external debt is associated with stringent repayment terms and conditions

3. It implicate a negative relationship of leverage both at corporate and national level

4. It implicate that changes in both domestic and public debt are valuable in predicting partially the variations in Nigeria gross domestic product and hence economic performance.

RECOMMENDATIONS

In view of the results of this study, the following recommendations are made;

1. Nigeria should concentrate on inward financing of her economic growth by utilizing mostly, domestic debts.

2. Indigenous technology should be encouraged in order to create the necessary challenges for sustained local technological growth in the country.

3. The government should facilitate product development by encouraging the development of varieties of money and capital market instruments. These will serve as tonic for diversified local long term borrowing to fund development needs.

4. The government and the organized private sector should accelerate the internationalization of the operations of Nigeria's money and capital markets. This is expected to encourage international communities to invest in Nigeria's corporate and national equities as well as debt instruments in order to provide the Nigerian economy with more liquidity at domestically determined terms and preferences in place of stringent conditions often imposed by international lenders and their agents.

5. External debt should only be utilized by Nigeria. either as a matter of last resort or to fund a project with high foreign exchange content.

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