IMPLICATION OF DOMESTIC DEBT ON ECONOMIC GROWTH IN NIGERIA

BY

Helen Walter MBOTO

Department of Banking & Finance Faculty of Management Sciences, University of Calabar 08038971701, innobetokoi@gmail.com

Innocent Obeten OKOI

Department of Banking & Finance Faculty of Management Sciences, University of Calabar 08134153626, ibitammboto@gmail.com

and

Edom Onyam EDOM

Department of Banking & Finance Faculty of Management Sciences, University of Calabar 08068151313, edomedom@unical.edu.ng

and

Monica Akeh UKONGIM

Department of Banking & Finance Faculty of Management Sciences, University of Calabar 07069407990, monica4love2007@gmail.com

The study assessed the implication of domestic debt on the growth of the Nigerian economy using treasury bills, treasury bond and other domestic debt instruments on economic growth. The ex-post facto research design was used. Secondary data were gotten from the CBN statistical bulletin for the period 1990 to 2019. The data were analyzed using the Autoregressive Distributive Lag (ARDL) technique. Findings from the analyses showed that there was an insignificant effect of treasury bill on the growth of the Nigerian economy both in the short run and long run. The study showed that there is a significant short run effect of treasury bond but an insignificant long run effect on the growth of the Nigerian economy and lastly, it was discovered that domestic

debt instruments other than treasury bond in Nigeria had no significant effect on economic growth. Based on the findings, the study recommended that government should reduce short term domestic borrowing and use more of long-term debt instrument in mobilizing funds for its activities to enhance economic growth. Also, in using long term borrowing instrument the focus should be on treasury bond as it promises high economic returns and prospects in the short run which could add up to long term economic progress and lastly borrowed funds should be monitored closely to avoid embezzlement and to ensure that it is used for infrastructural building and for the attainment of peace and security of lives and properties as this would trigger economic growth both in the long run and short run.

Key words: Crowding out effect, Stocks, Public Expenditure, Long term domestic debt, Medium term domestic debt, Short term domestic debt

Background to the Study

A nation normally borrows when its expenditure is higher than its revenue generated. Planned borrowings to finance public and infrastructural development facilitate economic growth and development in any developing nation. Nevertheless, borrowings without appropriate planning for investment may lead to insolvency and high interest payment, which may pose some negative effects on the economy (Joy & Panda, 2020). Moreover, continuous increase in domestic debt of a nation can hinder the government from making more productive investment in social amenities, public health and education (Jonny & Johnwalker, 2018). Consequently, the general long-term effects of domestic debt could be lower consumption, reduced economic welfare and smaller total output.

Alison (2003) noted three fundamental reasons for government domestic debt [1] is to finance budget deficit [2] is for the implementation of monetary policy and [3] is to develop the financial instruments in order to deepen the financial markets. It is believed that domestic debt has positive effects on economic growth in the short run by facilitating aggregate demand and output. Some proponents support a negative debt growth relation in the long run by crowding out private investments and threaten economic growth through high level of interest rates, skyrocketed inflation and higher future taxation (Mhlaba, 2019). The servicing of debt takes a large portion of government income. A country that has no strong financial market to borrow funds is prone to huge interest cost of servicing loans or debts. In the long-run, higher interest rate demotivate investment and thus crowd out private investment. This will subsequently

affects stock of capital formation thereby lowering the level of output. Thus, the long-term after effect of debt would reduce total output, retarded economic welfare and smaller consumption.

Nigeria struggled with a high debt service to revenue ratio since recession of 2016 as revenues slid in direct correlation with the fall in oil prices. Nigeria spent about 2.45 trillion naira in debt service in 2019 out of total revenue of $\mathbb{N}4.1$ trillion or 59.6 percent debt service to revenue ratio (Ogunjimi, 2019). The continued reduction in Nigeria's revenue raises the questions around the liquidity position of the economy. The scope of this study spans from 1990-2019. The independent variables were measured treasury bills, Treasury bond and other domestic debt while the dependent variables were GDPGR. In view of these, the study will bridge the gap by investigating the effect of rising domestic debt on the growth of the Nigerian economy.

Statement of the Problem

Public debt is used by any nation to finance expenditures. There can be increase in economic growth through the proper use of resources in order to achieve government macro-economic goals. However, mismanagement of public debt will limit economic growth. One of the major issues facing Nigeria's government is foreign public debt. Until the late 1990s less developed countries did not address the risk and challenges of internal debt. The growth of public domestic debt has not been restricted to make sure that plenty resources are available after debt servicing in order to finance government's expenditures. Improper domestic debt servicing technique has contributed to some of Nigeria's economic problems. Example, domestic debt outstanding, domestic credit and total domestic debt experienced in the country has increased in a significant manner without replicated effect on economic growth or GDP. For instance, for about two decades now, there has been deteriorating growth in real GDP. There has also been a high rate of inflation, high unemployment rate, and worsening of the balance of payment deficits, there has also been diversion of financial resources in servicing of huge foreign debts. These huge debt servicing has led to a constant depletion in our foreign reserves, hence, making it difficult for the government to conveniently fund other sectors of the economy for developmental purposes.

Objectives of the Study

The major objective of this study is to examine the effects of domestic debt on the growth of the Nigerian economy. The specific objectives of this study are: to examine the effects of treasury bill on the growth of the Nigerian economy; to examine the effects of treasury bond on Nigerian economy and to examine the effects of other domestic debt on Nigerian economy.

System Stability Theory (SST)

The study is anchored on System Stability Theory (SST). The theory comprises the development cycle model (Beenstock 1984, Vaubel 1983, Deepak Lal 1983, Baver 1991) and the profligacy model (Baver 1991; Krueger 1985). The system stability theory states that like individuals, nations tend to obtain debt during their youthful phase or development cycles. However, just as individuals repay their debt at maturity so do nations reduce their indebtedness and trade surpluses as they reach mature phase of the development cycle. Burnside (2002), maintains that the debt crisis is a temporary crisis of liquidity induced by anti-inflationary policies. He asserts that the liquidity crisis will soon disappear suddenly as it appears that commodity prices will soon rise in the national markets, and real interest rate will fall as economic prosperity occur with a fall in inflation rate. The basic assumption of the system stability theory is that the real world is that of normal curves and is fundamentally stable where orderly relationships prevail. In spite of the theoretical facts of the Development Cycle Model (DCM) that underlie the system stability school of thought, it fails to tell us when the improvement in developing countries will occur, the theory is very optimistic (Beenstock 1984).

The profligacy thesis maintains that domestic debt crisis is caused by financial recklessness of both creditors (banks) and debtors (nation). It noted that most debtors have problems balancing their budgets. From system stability point of view, the emergence of fiscal deficit is a reflection of local unwillingness to set strict monetary target and policies. This reluctance is due to the existence of political regimes which are oppressive and unpopular. To secure legitimacy and or remain in power, they are reluctant to increase taxes and hence resort to increase expenditure financed by borrowing from the central Bank (Krueger, 1985). Profligacy thesis holds that the banks and borrowers have acted imprudently, they have behaved without honour and must be made to bear the cost of adjustment. It identified domestic economic policy short comings as important factors in the domestic debt crisis. These include not only large and bulging fiscal deficit but also trade reflected in overvalued exchange rate and import substitution industrialization strategy (Christensen, 2004).

System stability theory recommends a free market economy, privatization and commercialization of state-owned enterprises with government providing only

the enabling environment. Government should concentrate on provision of infrastructural facilities, creating the enabling environments for the activation of private sector development. It suggests that profligate countries and banks should bear the burden of adjustment. The system stability theory is against debt cancellation because it may be construed as rewarding financial recklessness and indiscipline (Fosu, 1996).

In summary, the system stability theory recognizes that the domestic debt crisis arose from policies that have wasted resources and damaged the standard of living and development. These policies have led to distortions in relative prices and have encouraged capital flights. It recommends a complete halt of further funds to defaulters, a ban on domestic debts rescheduling to provide the right moral fiber and signals to these countries. According to Beenstock (1984), the cost of debt crisis should be borne primarily by debtors themselves and the banks. It advocates reforming the economies of debtor countries to get their prices right, privatize part of their economies and re-orientate them to the world economy. It recommends that developed countries should adopt lower interest rate (that is, expansionary monitory policies and contractionary fiscal policy rather than the reverse).

Empirical Literature Review

The following are some of the scholarly studies that were reviewed for the past years on domestic debt and its consequences. Abbas and Christensen (2007) examined the impact of domestic debt on economic growth for ninety low income countries for the period of 1975 – 2004. The method used was Granger causality regression model. The result shows that moderate levels of marketable domestic debt as a percentage of GDP have significant positive linear relationship on economic growth. However, debt levels that were more than 35 per cent of total bank deposits have negative impact on economic growth.

Muhdi and Sasaki (2009) studied the roles of external and domestic debt in Indonesia. The duo used ordinary least-square estimation technique using yearly data from 1991 to 2006. The paper found out that external debt has become a fundamental policy of reducing deficit burden of nations. It further stressed that public debts has positive effects on both investment and economic growth. It further added that, the policy produces an upsurge in currency depreciation during the period of debt servicing.

Checherita and Rother (2016) determine the average impact of government debt on per capita GDP growth for twelve-euro area countries over the period 1970 - 2009. That the various avenues through which government debt impact on economic growth where: total factor productivity, real interest rates, private savings and public investment. The study showed a non-linear negative impact of government debt on economic growth. The duo recommended that there was need to finance government expenditure even though much achievement has not been gotten in reducing its spending and this has incessantly raised the size of domestic debt.

Peter, Dennis and Chukwedo (2013) explored the relationship between government domestic debt and economic growth of Nigeria. The findings revealed that domestic debt and credit had significant and positive relationships with GDP, while domestic debt servicing had negative relationship with GDP. In the same vein, Demian and Chukwunonso (2014) investigated the structure and configuration of domestic debt and its impact on private investment in Nigeria. The study used multiple regression models. The annual data spanning from 1970 to 2012. The article confirmed that domestic debt had a significant negative impact on foreign private investment in Nigeria and debt servicing displayed positive effect on private foreign investment in Nigeria.

The work of ThankGod (2014) assessed the implications of public debt on private investment in Nigeria over the period of 1981 to 2012. The study made use of instrumental variable technique for the computation of normal based standard errors for turning points. The result discovered that domestic debt had a linear and positive impact on private investment. Private consumption expenditure had a negative impact on private investment.

Mohammed, Mahuzu & Igwike (2015) x-rayed the link between economic growth and debt. They used some advanced econometric tools to analyze the effect of government borrowing on national output in 48 countries of Sub-Saharan African. The years covered were 1995 to 2012. It was found that public debt and national output has a linkage in eight economies from the forty-eight nations. It was recommended that there is necessity to consider the impact of policy implementation on the growth of the economy

Onogbosele and Ben (2016) examined the effect of domestic debt on economic growth of Nigeria. The covered was 1985 - 2014. Vector Auto Regression method of analysis was used. It was discovered that domestic debt is

fundamentally vital in the growth process of Nigerian economy. The variance decomposition analysis showed that federal government of Nigeria exerts more pressure on the growth rate of gross domestic product in Nigeria. This was attributed to shocks received from treasury bonds. In addition, development stocks and interest rate contributed the least to gross domestic product. Variance decomposition analysis revealed that economic growth reacted positively to shock in the federal government of Nigeria bonds and adversely to shocks in treasury bills over the period under review. However, the response of gross domestic product to shocks in development stocks and interest rate was unstable.

Igberi, Odo, Anoke & Nwachukwu (2016) reviewed the impact of growing government borrowing on the rate of unemployment in Nigeria. The period studied was 1980 to 2015. The study adopted ARDL approach and Wald test statistical procedure in analyzing data. The result was that of a stable long-run equilibrium relationship between government borrowing and the rate of unemployment. There was a positive and significant relationship between growth rate of GDP and the rate of unemployment. In addition, an indirect relationship between inflation and unemployment was also discovered. In conclusion, the study opined that public debt had significant effect on Nigerian economy. That an upsurge in public debt had not reduced the degree of unemployment.

Ewubara, Nteegah and Okpoi (2017) explored the influence of public borrowing on growth of the Nigerian economy spanning from 1980-2015. ARDL method of analysis was used. Result indicated that external debt had direct and significant impact on growth. Domestic debt significantly slow down growth in Nigeria both in the long and short runs. Total debt services stock was found to be negative and insignificant to economic growth whereas net foreign direct investment and foreign exchange reserves has influence on economic growth positively and was both significant at 5 percent level. Akhanolu, Babajide and Akinjare (2018) assessed the consequences of government debt on economic growth from 1982 to 2017. The study used twostage least square regression. It was discovered that internal debt positively affects the economy.

Research Methodology

The ex-post facto design was adopted because the variables intended to be studied are secondary since they are historical in nature. To validate the stability of the estimates generated by the ARDL technique, the CUSUM test

| was applied. Since the variables were integrated of different orders, in other words, since the variables were both of order I (1) and I (0), it was indicative that the estimating model was Autoregressive Distributive Lag (ARDL) technique, this, therefore, informed the adoption of the ARDL approach in this study. Since the variables were integrated of order I (1) and I (0), the study |
|--|
| proceeded to assess the estimates of the parameters using the ARDL bound testing approach. |
| Model Specification |
| The relationship between the variables of this study may be expressed |
| functionally thus: |
| $GDPGR = f(DMT) \dots (1)$ |
| Where: |
| GDPGR = Gross Domestic Product Growth Rate |
| DMT = Domestic Debt |
| This study however considers domestic debt in terms of treasury bills, treasury |
| bond and federal government bond. This relationship is therefore restated thus: |
| GDPGR = f(TBR TBD, ODD)(1) |
| Where |
| GDPGR = Gross Domestic Product Growth Rate |
| TRB = Treasury Bills |
| TBD = Treasury Bond |
| ODD = Other Domestic Debt |
| Long-run ARDL cointegration analysis |

Long-run ARDL cointegration analysis

Table 1: Long run ARDL estimates Dependent Variable: D(GDPGR)

| 1 | `` | , | | |
|--------------|-----------|------------|-------------|--------|
| | Coefficie | | | |
| Variable | nt | Std. Error | t-Statistic | Prob. |
| | - | | | |
| С | 15.65334 | 11.93804 | -1.311215 | 0.2222 |
| D(GDPGR(-1)) | 1.189419 | 0.617918 | 1.924881 | 0.0864 |
| D(GDPGR(-2)) | 0.263806 | 0.372303 | 0.708578 | 0.4965 |
| D(GDPGR(-3)) | 0.156280 | 0.401296 | 0.389439 | 0.7060 |
| D(LTRB(-1)) | 2.627899 | 2.418719 | 1.086484 | 0.3055 |
| | - | | | |
| D(LTRB(-2)) | 0.269976 | 3.067882 | -0.088001 | 0.9318 |
| D(LTRB(-3)) | 2.876456 | 2.469376 | 1.164851 | 0.2740 |
| | - | | | |
| D(LTBD(-1)) | 1.813097 | 2.155002 | -0.841344 | 0.4219 |
| | | | | |

| | - | | |
|-------------------|-----------|--------------------|---------|
| D(LTBD(-2)) | 3.242939 | 2.201058 -1.473354 | 0.1747 |
| D(LTBD(-3)) | 0.541163 | 1.398633 0.386923 | 0.7078 |
| D(LODD(-1)) | 2.673638 | 1.438405 1.858752 | 0.0960 |
| D(LODD(-2)) | 0.168597 | 1.250123 0.134865 | 0.8957 |
| D(LODD(-3)) | 1.559795 | 1.149289 1.357183 | 0.2078 |
| | - | | |
| GDPGR(-1) | 1.331701 | 0.550770 -2.417890 | 0.0387 |
| | - | | |
| LTRB(-1) | 1.068895 | 1.676097 -0.637729 | 0.5395 |
| LTBD(-1) | 5.344142 | 2.474377 2.159793 | 0.0591 |
| | - | | |
| LODD(-1) | 0.278136 | 0.375435 -0.740836 | 0.4777 |
| R-squared | 0.798682 | | |
| Adjusted R- | 0.170002 | | |
| squared | 0.740785 | | |
| - 1-ur vu | | Durbin-Watson | 2.11586 |
| F-statistic | 2.2315938 | | 0 |
| Prob(F-statistic) | 0.111717 | | 0 |
| =====(==========) | | | |

Source: Researchers' E-views 9.1 Computation, 2021

Table 1 above is the ARDL long-run estimates of the implication of domestic debt on economic growth in Nigeria. To test for the significance of long-run estimates, the study applied the Wald statistics. The extract of the result is as presented in table 2 below:

Table 2: Wald test of long-run estimates

| Test Statistic | Value | df | Probabili ty |
|----------------|----------|--------|-----------------|
| F-statistic | 2.356059 | (4, 9) | 0.1314 |
| Chi-square | 9.424235 | 4 | 0.0513 |

Null Hypothesis: C(14)=C(15)=C(16)=C(17)=0 Null Hypothesis Summary:

| Normalized Restriction | | |
|------------------------|-------|-----------|
| (= 0) | Value | Std. Err. |

| | | 0.55077 |
|-------|-----------|---------|
| C(14) | -1.331701 | 0 |
| | | 1.67609 |
| C(15) | -1.068895 | 7 |
| | | 2.47437 |
| C(16) | 5.344142 | 7 |
| | | 0.37543 |
| C(17) | -0.278136 | 5 |

Restrictions are linear in coefficients.

Source: Researchers' E-views 10 Computation, 2021

In Table 2 the value of the above F-statistics of 2.356 and its corresponding probability of 13.14 per cent showed that the null hypothesis cannot be rejected. Meaning that the lag values of GDPGR, treasury bill, treasury bond and other domestic debt had no causal relationship with GDPGR in the long run. In other words, there is no long-run causality running from the past values of domestic debt and economic activities to economic growth in Nigeria in the current period.

Short-run dynamic analysis

The study also proceeded to assess the short-run dynamics of the estimates of the parameters using the ARDL approach. A Wald test of the short run estimate was conducted and the resulted was extracted as presented below:

| Variable | Null hypothesis | F- | P-value | Decision |
|----------|---------------------------|------------|---------|-----------------------|
| | | statistics | | |
| LTRB | C(5)=C(6)=C(7)=0 | 0.8052 | 0.5148 | Accept H ₀ |
| LTBD | C(8)=C(9)=C(10)=0 | 4.5547 | 0.0237 | Reject H ₀ |
| LODD | C(11) = C(12) = C(13) = 0 | 3.1644 | 0.0640 | Accept H ₀ |

Table 3: Wald test of long-run estimates

*denote rejection of null hypotheses at 5% level Source: Extract from Appendix, 2019

From the above table 3, it could be seen that the null hypotheses for domestic debt variables of treasury bills and other domestic debt were accepted. This was because their F-statistics values of 0.8052 and 3.1644 and their corresponding probabilities of 51.48 per cent, and 6.40 per cent were greater than 5 per cent required for significance. Again, the null hypothesis for treasury bond was rejected in the short run. Since its F-Statistics value of 4.5547 had a corresponding P-value of 2.37 per cent. Meaning that there was a strong influence of treasury bond on economic growth in Nigeria.

Test for reliability and stability of the short-run estimates To test whether or not the short-run estimates of the results were reliable and stable, the study applied the Breusch-Godfrey serial correlation LM test, the. Extracts of the results of the test is presented belowi Table 4 Table 4: Breusch-Godfrey Serial Correlation LM Test:

| F-statistic | 0.231414 | Prob. F(2,10) | 0.7975 |
|---------------|-----------|---------------|--------|
| | | Prob. Chi- | |
| Obs*R-squared | 1.150122S | quare(2) | 0.5627 |

Source: Researchers' E-views 10 Computation, 2021

From this result, the prob chi-square was greater than 5 per cent, it was 56.25 per cent, meaning that the null hypothesis of no serial correlation was accepted. It therefore, means that the model was free from serial correlation.

Discussion of Findings

This study examined the effect of domestic debt on the economic growth in Nigeria using treasury bills, treasury bond and other domestic debt as proxies for domestic debt. According to the findings of the above analysis, treasury bills have an insignificant effect on economic growth in Nigeria. This means that government borrowing through treasury bills do not influence or trigger growth in economic activities. In other words, government borrowing through treasury bills has only a small contribution to economic growth which also means that borrow through short term debt instruments do not induce economic growth in Nigeria. This finding has been supported by Abbas and Christensen (2007) who studied the impact of domestic debt on economic growth for low income countries for the period of 1975 - 2004. The study showed that moderate levels of marketable domestic debt as a percentage of GDP have significant positive, non-linear impacts on economic growth, but debt levels exceeding thirty five percent of total bank deposits have negative and insignificant impact on economic growth.

The study also revealed that treasury bond had a significant effect on the growth of the Nigerian economy. An increase in long term borrowing induces large economic growth in Nigeria. By this finding, increases in treasury bond enhances economic growth in Nigeria. This implies that borrowing through the use of treasury bond could enable the government to invest in long term projects that promises high social welfare which could in turn enhance productivity and trigger growth in the Nigeria economy. This finding has been supported by Onogbosele and Ben (2016) who studied the effect of domestic

debt on economic growth in Nigeria. The study revealed that domestic debt played a less important role in the growth process of Nigerian economy. The result implies that government bonds exerts more pressure on the growth rate of gross domestic product in Nigeria. This was followed by shocks received from treasury bonds, while development stocks and interest rate contributed the least to gross domestic product.

Lastly, the study reveals that there is an insignificant relationship between other domestic debt and economic growth in Nigeria. This means that other domestic debt instruments in Nigeria are not growth inducing. In other words, other domestic debt instruments do not result in large economic growths in Nigeria. In effects, government borrowing through the use of domestic debt instruments, other than treasury bond were not effective in enhancing economic growth in Nigeria. This finding is supported by the Ewubara, Ntegah and Okpo (2017) who examined the effect of public borrowing on growth of the Nigerian economy over the period of 1980-2015. The result of the study indicated that government external debt had direct and significant impact on growth, while domestic debt significantly retarded growth in Nigeria both in the long and short runs.

Summary of Findings, Conclusion and Recommendations

This study explored implication of domestic debt on the growth of the Nigerian economy. The study adopted the ARDL technique to assess the effect of the treasury bills, treasury bond and other domestic debt on the growth of the Nigerian economy. The following major findings were made: There is an insignificant effect of treasury bill on the growth of the Nigerian economy both in the short run and long run. There is a significant short run effect of treasury bond but an insignificant long run effect on the growth of the Nigerian economy. Domestic debt instruments other than treasury bond in Nigeria had no significant effect on economic growth.

From the analysis, it could be inferred that domestic debt in Nigeria do not contribute significantly to economic growth. Other than treasury bond, all other domestic debt instruments are not viable for economic growth enhancement. From the above findings, the following recommendations were made: government should reduce short term domestic borrowing and use more of long term debt instrument in mobilizing funds for its activities to enhance economic growth. In using long term borrowing instrument the focus should be on treasury bond as it promises high economic returns and prospects in the short run which could add up to long term economic progress. Borrowed funds should be monitored closely to avoid embezzlement and to ensure that it is used for infrastructural building and for the attainment of peace and security of lives and properties as this would trigger economic growth both in the long run and short run.

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