



ANALYSIS OF THE IMPACT OF DOMESTIC DEBT ON THE NIGERIAN ECONOMY: 1980-2021

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Cite this article:

El-Yaqub A. B., Ibrahim M., Sule M. (2024), Analysis of the Impact of Domestic Debt on the Nigerian Economy: 1980-2021. African Journal of Economics and Sustainable Development 7(2), 29-39. DOI: 10.52589/AJESD-FSUNXI6S

Manuscript History

Received: 7 Apr 2023

Accepted: 14 Jul 2023

Published: 26 Mar 2024

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ABSTRACT: *The study investigates the impact of domestic debt on the Nigerian economy from 1980 to 2021 to ascertain, among other things, the relative significance and impact of domestic debt on Nigeria's GDP growth. The study uses quantitative research with a secondary focus on CBN data. The Debt Management Office and Central Bank of Nigeria provided information on the stock of domestic debt, GDP, interest on domestic debt, and capital spending for Nigeria between 1980 and 2020. The gathered data were subjected to a linear regression model, and the model's effectiveness was evaluated using the E-view statistical program. The Unit Root Test and Ordinary Least Square Method were the techniques utilised in this study to assist in explaining the variation and other explanatory variables. The Autoregressive Distributed Lag model (ARDL)-Bound Test is used in the study to investigate and analyse cointegration. According to the findings, Nigeria's economy is negatively impacted by domestic wagers, interest rates on domestic debt and capital expenditures, budget deficits, and private-sector lending. The study suggests good domestic debt management and suitable debt-servicing strategies for the efficient expansion of the economy in light of this finding.*

KEYWORDS: Domestic Debt, Interest Rate and Economic Growth

JEL Classification: E61, E62



INTRODUCTION

Citizens, government institutions, privately held corporations such as banks, and the economy as a whole are all affected by a country's debt structure. The total of domestic and international borrowings is called the public debt. Dewett and Navalur (2010) describe public debt as a government's borrowing from inside or outside the nation, private people or groups of persons, banks, and non-banking financial organisations. Debt is defined by the International Monetary Fund (IMF) as an obligation owed to others that is represented by a financial instrument or other formal equivalent. Debt is also defined (El-Yaqub, 2017) as the quantity, disbursement, and ongoing contractual obligations of citizens of a nation to non-residents to repay the principal with or without interest or to pay interest with or without principal.

This is because the market fails to allocate resources efficiently; other supplementary mechanisms for allocating resources directly, such as; (the public provision of goods and services) or corrective devices that interfere with the price mechanism, induce the market to function more effectively and efficiently in resource allocation are being considered. Consequently, the government has intervened in resource allocation by providing public goods and services. To fulfil its role successfully, the government must spend money. Like many other emerging countries, Nigeria is beset by rising government spending outstripping government income. As a consequence, government borrowing has become necessary. When traditional income streams (tax and non-tax) are insufficient to fund government expenditures, borrowing becomes necessary. The government needs to borrow to fund its budget deficit to increase domestic investment and, as a result, promote economic growth and development. According to (Dewett & Navalur 2010 and El-Yaqub, 2017), debt refers to a scenario in which a borrower receives something from a lender in exchange for agreeing to pay the lender the same amount later.

Egbetunde (2012) asserts that developing countries, such as Nigeria, are urged to borrow to supplement their limited pool of capital and close the domestic savings-investment gap. Suppose the borrowed money is successfully reinvested and properly utilised for profitable projects. In that case, it will assist in accelerating the country's growth and, as a result, improve the quality of life of its citizens.

Interestingly, in 1970, Nigeria's entire domestic debt was just 1.1 billion Naira. It gradually increased to N8.2 billion in 1980. Following that, it soared to N84.1 billion in 1990. The profile of this debt grew to about N898.2 billion in 2000 before reaching N1,525.91 billion at the end of December 2005, in line with rising fiscal deficits. Nigeria's domestic debt was at \$21.8 billion in October 2010, up from \$17.7 billion in 2009. Rapid growth plans and changes in the macroeconomic environment have been cited as significant reasons for Nigeria's domestic debt level's stratospheric rise (Debt Management Office, 2009) As a consequence, Nigeria's indebtedness has gone beyond the acceptable boundaries needed to achieve targeted objectives and create debt-free or less burdened products, which would improve the economic process and, as a result, reduce poverty levels. According to recent financial data, Nigeria's debt has been increasing over time. According to the Debt Management Office 2009, debt stock stood at N7.421 trillion as of June 2014, bringing total public debt to N8.5 trillion (excluding state government debts, which stood at N1.6 trillion as of December 2013) and N7.42 trillion as of June 2014, compared to N7.18 trillion as of the first quarter of 2014, representing a 3.3 per cent increase in the first half of 2014. This trend has persisted, with debt reaching 12.58 trillion and



12.83 trillion in 2017 and 2018, respectively. The debt amount rose to N25.70 trillion in 2019 and N32.9 trillion in 2020, respectively (DMO, 2020).

Despite the continued fondness for loans, Nigeria's economy is still marked by low per capita income (one of the lowest in the world), high unemployment rates, a dwindling economy, insufficient basic amenities, poor infrastructural development, and declining GDP growth rates, and it was recently ranked as the world's poverty capital (Akhanolu et al., 2018). Furthermore, the Nigerian economy fell into an unnecessary recession between 2016 and 2017 due to bad borrowing management. Against this backdrop, this study looks at the impact of domestic debt on the Nigerian economy from 1980 to 2021. As a result, the study's objective is to investigate the impact of domestic debt on Nigeria's Economy from 1980-2021.

REVIEW OF RELATED LITERATURE

Theoretical Framework

To underpin this study, Neoclassical theory is used as below;

The Neoclassical Theory

The theoretical framework guiding this study is the Neo-classical theory by (Solow and Swan, 1956). The theory was of the view that debt has a direct impact on economic development. This is because it is expected that the investment will increase if the borrowed funds are utilised well. Growth should rise and allow for timely debt repayment as long as nations utilise borrowed money for feasible projects without suffering from macroeconomic instability, policies that distort economic incentives, or large hostile shocks. On the other hand, the indirect impact of indebtedness is its impact on investment. The decrease in resources available for investment caused by debt service is the transmission mechanism via which debts influence growth. Furthermore, public debt may serve as an implicit tax on a country's resources, burdening future generations through a slowed flow of profits from smaller private capital stock. As a result, long-term interest rates may rise, private investments necessary for productive development may be crowded out, and capital accumulation may decline.

Empirical Review

This section reviewed numerous works to clearly understand our study objective. Those reviewed works were presented according to the currency of the works as follows;

In their 2016 study, Onogbosele & Ben examined the impact of domestic debt on Nigeria's economic growth from 1985 to 2014. The Vector Autoregression method of analysis was used in the study. The study's conclusions showed how crucial domestic debt was to expanding the Nigerian economy. The variance decomposition analysis revealed that the Nigerian federal government's bonds place greater pressure on the growth rate of the country's gross domestic product. Treasury bond shocks came in second, whereas development stock and interest rate shocks had the smallest impact on changes in GDP. The results of the impulse response function supporting the variance decomposition analysis showed that over the course of ten years, economic growth responded favourably to shocks in the federal government of Nigeria



bonds and negatively to shocks in treasury bonds. However, the gross domestic product did not respond consistently to changes in interest rates and development stock shocks.

Omimakunde & Onifade (2022) examined the relationship between domestic debt and economic growth using the ARDL model. Surprisingly, they found that domestic debt does not significantly impact economic growth in the short run but has a significantly negative impact in the long run. This calls for further investigation.

The work of Okwu, Obiwuru, Obiakor & Oluwalaiye (2015) employed relevant econometric models to examine the effects of domestic debt on economic growth in Nigeria during the 1980 to 2015 periods. Variables of analytic interest were real gross domestic product (RGDP) as economic growth proxy, and domestic debt stock (DDS) and domestic debt servicing expenditure (DDSE) as explanatory variables, with government expenditure (GEXP) and banks' lending rates (BLR) as moderating variables. On individual merits of the explanatory variables, the results presented evidence of significant short- and long-run positive effects for DDS, negative effects for DDSE but insignificant, and negative effects for BLR. The variables jointly explained significant effects and considerably high power in explaining variations in the economy's growth during the study period.

Adams, Magaji, Ayo & Musa (2022) investigated the extent to which domestic debt influences the economic growth of Nigeria. It drew on quantitative research methodological framework and specifically employed the Ordinary Least Square (OLS) Regression technique to test the relationship between Gross Domestic Product, interest rate, domestic debt, budget deficit and domestic credit to the private sector. The findings of the study revealed that there was a positive relationship between domestic debt and the economic growth of Nigeria.

In their 2017 study, Ewubara, Nteegah & Okpoi looked at the impact of public borrowing on the expansion of the Nigerian economy between 1980 and 2015. The analysis in the study used the ARDL approach. The study's findings showed that while domestic debt severely slowed growth in Nigeria both in the long and short run, the external debt had a direct and considerable impact on growth. In contrast, net foreign direct investment and foreign exchange reserves positively impacted economic growth. They were both significant at a 5% level at lag three, whereas total debt services stock had a negative and minor impact. The non-significance of the error correction term suggests that economic development in Nigeria responds slowly to changes in the dynamics of public debt, despite the goodness of fit being strong and reasonable in explaining changes in growth.

Akhanolu, Babajide & Akinjare (2018) examined the implications of the government's debt on economic growth from 1982 to 2017. The study used two-stage least square regression. The result shows that internal debt positively affects the economy. The study is in line with that of Tamunonimim (2013), who looked at the connection between domestic debt and the poverty level in Nigeria and discovered a long-term connection between the two. Additionally, he discovered a positive and highly substantial impact of domestic debt on bank credit. In the present time, the evidence may not support this result, nevertheless.

Nestor & Ebikela (2020) studied the Effect of Domestic Debt on Economic Growth in Nigeria. The specific objective of the study was to ascertain the impact of domestic debt on real gross domestic product growth in Nigeria within thirty-six years (36) from 1981 to 2016. The researcher adopted a Causal Comparative or ex-post facto research design (time series



analysis). The model used Real Gross Domestic Product Growth (RGDPG) as the endogenous variable for economic growth, while Domestic Debt (DODT), External debt (EXDT) Interest Rate (INTR) represents the exogenous variables. The results indicated that the variables are integrated at first difference or of order one, I (1), but real gross domestic product growth is integrated at level I (0) and justifies using ARDL as the series are integrated at different levels. Public debt was found to be a significant determinant of economic growth. The study recommends that government should make available sustainable deficit budgeting, and effective utilisation of resources, through effective and efficient implementation of projects and programs. However, the research used in 2020 should have utilised up-to-date data.

Opara, Nzotta & Kanu (2021) conducted a study on Nigeria's Domestic Public Debts and Economic Development from 1981-2018. The study was in response to the doubts raised in some quarters as to whether the continuous increase in domestic debt over the years has led to the economic development of Nigeria, as the former has been known to influence the latter if well-harnessed and executed. The secondary data used in the study were sourced from the Central Bank of Nigeria Statistical Bulletin, Debt Management Office of Nigeria, World Bank Development Indicators and United Nations Development Program. The study used Ordinary Least Square regression tools to determine the statistical relationship between Nigeria's domestic public debt profile, Human Development Index (HDI), and private sector investment. The study's outcome in the first model showed that domestic debt servicing and state governments' domestic debts are significantly related to economic development. On the other hand, Federal domestic debt and State domestic debt are significantly related to private-sector investment. The study, therefore, recommends that the government be cautious in its domestic borrowing policy, given that servicing debt always becomes a burden to the sustainability of economic gains and its tendency to crowd out private sector investment in Nigeria.

The previous works are done by other scholars as reviewed on various impacts and effects of domestic debt on the Nigerian Economy. Most of the literature reviewed has focused on Nigeria's domestic debt and economic growth, neglecting some important variables like private sector credit and interest on domestic debt and capital expenditure. This research filled this gap by including these important variables to explain the impact of domestic debt on economic growth in Nigeria.

METHODOLOGY

Model Specification

The paper investigates the impact of domestic debt on the Nigerian economy. The model used was adapted from Adams, Magaji, Ayo & Musa, who conducted a study on the "Impact of Domestic Debt on Economic Performance in Nigeria (1970-2013)" and described their model as;

GDP = Gross Domestic Product, Serving as a proxy for Economic Growth.

DD = Domestic Debt as a percentage of GDP

M2 = Broad Money Supply as a percentage of GDP



EXCHR = Naira Exchange Rate to the \$US CPS = Credit to the private sector

FD = Fiscal Deficit as a percentage of GDP

However, this paper utilises gross domestic product, domestic debt, interest rate on domestic debt and capital expenditure, budget deficit and private sector credit. This paper's model is thus based on the following functional connection, which may be expressed implicitly as follows:

$$GDP = f(DDEBT, INTRATE, BD, PSC) \dots\dots\dots 3.1$$

External debt was removed from the model for this research, interest rate on domestic debt and capital expenditure, budget deficit and private sector credit were added, and the model is presented explicitly, as written in natural logarithm:

$$\text{LogGDP} = f(\text{LnDDEBT}, \text{INTRATE}, \text{LnBD}, \text{LnPSC}) \dots\dots\dots 3.2$$

Thus, equation 3.2 was written in the form of a log-linear relationship as follows;

$$\text{LogGDP} = \text{Ln}\alpha_0 + \alpha_1 \text{LnDDEBT} + \alpha_2 \text{INTRATE} + \alpha_3 \text{LnBD} + \alpha_4 \text{LnPSC} + \mu_t \dots\dots\dots 3.3$$

Where Ln= Natural logarithm

GDP = log of Gross Domestic Product, measured using a constant price

Ddebt = log of Domestic Debt

PSCt = log of Private Sector Credit

Intrate= Interest rate on domestic debt and capital expenditure

BD= Budget Deficit

μ_t = Stochastic variable (error term)

A priori Expectation

The a priori expectation is expressed as follows: $\alpha_1 < 0$, $\alpha_2 < 0$, $\alpha_3 < 0$, $\alpha_4 < 0$. Therefore, Based on a priori, all are expected to be either negative or positive. This is so because the independent variables in the model are expected to either increase or decrease GDP. The normal distribution of the error term is the key assumption of the model.

Data Estimation Technique

The Augmented Dickey-Fuller (ADF) test was adopted to test the time-series properties of data and determine the order of integration to stationarity. Autoregressive Distributed Lag Model (ARDL), as suggested by Pesaran, Shin and Smith (2001) for cointegration investigation and analysis, was employed. This procedure was adopted because it has better small sample properties than alternative methods (i.e., Engel-Granger (1987), Johansen and Julius (1990), Philip and Hansen (1990)). Another advantage of ARDL bounds testing is that unrestricted ECM takes satisfactory lags that capture the data-generating process in a general-to-specific specification framework. This method also avoids classifying variables as I(1) and I(0) by developing bands of critical values that identify the variables as stationary or non-stationary processes.



Data Types and Sources

The time-series data were obtained from the Central Bank of Nigeria's statistical bulletin volume 29 from 1980 to 2021.

Data Analysis

Unit Root Test.

The unit root test was carried out based on the Augmented Dickey-Fuller (ADF) test at a 5% significance level.

TABLE 1: Results of unit root test

VARIABLES	ADF-Test Statistics	Critical Value	Series of stationarity
GGDP	-2.411699	-2.960411	I(1)
DDEBT	2.226620	-2.960411	I(1)
INTRATE	-2.45615	-2.960411	I(1)
PSC	-0.853387	-2.960411	I(1)
BD	- 3.173728	-2.960411	I(0)

Source: Author's Computation, E-view 9.0 (2023)

Based on the above result of the Augmented Dickey-Fuller unit root test, all the variables are integrated at order 1(1) except budget deficit which was I(0). They are significant at a 5% level. Therefore, we concluded that the time series collected were all stationary and proceeded to ARDL bound and co-integration tests.

ARDL Bound Test Result

The ARDL bound test result indicated that the F-statistics value 6.33 was greater than the I (1) bound test value 5.07 at a 5% significant level. Therefore, we reject the null hypothesis of no co-integration and conclude a long-run relationship exists among the variables in the model.

ARDL Result

Table 2. ARDL Cointegrating and Long Run Result

ARDL Cointegrating And Long Run Form

Dependent Variable: GDP

Selected Model: ARDL (1, 0, 0, 0, 0)

Date: 01/14/23 Time: 13:31

Sample: 1980 2021

Included observations: 40

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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D(DDEBT)	-3776.92	42586.33	-0.089	0.9298
D(INTRATE)	-269.00	413.09	-0.65	0.5193
D(BD)	-2.72	5.96	-0.46	0.6509
D(PSC)	-0.012	0.026	-0.49	0.6251
CointEq(-1)	-0.46	0.15	-3.04	0.0046

$$\text{Cointeq} = \text{GDP} - (-8135.9642 * \text{DDEBT} - 579.4699 * \text{INTRATE} - 5.8644 * \text{BD} - 0.0279 * \text{PSC} + 57289.27)$$

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DDEBT	-8135.96	91309.663	-0.089103	0.0295
INTRATE	-579.46	954.9637	-0.606798	0.0480
BD	-5.86	12.6030	-0.465311	0.0447
PSC	-0.027	0.0549	-0.508518	0.0144
C	57289.27	54929.2250	1.042965	0.3043

Source: Author's Computation, E-view 9.0 (2023)

As indicated in Table 2, the long-run coefficients of domestic debt, the interest rate on domestic debt and capital expenditure, budget deficit and private sect credit have a significant negative impact on the economic growth in Nigeria. The coefficient of the cointegration is negative and statistically significant. This shows the speed of adjustment towards equilibrium in the long run. This also means that the errors will continue to be corrected at 46%.

Residual Diagnostic Tests

The study performed residual diagnostic tests on the model being Breusch-Geofrey Serial Correlation LM and ARCH LM tests. As observed from the test, considering the probable chi-square values of 0.6790 and 0.09, respectively, which are greater than 0.05. And the decision rule is to reject the null hypothesis (Ho) if the prob. value is greater than 0.05; therefore, rejecting the above null hypothesis that there is no serial correlation in the model and no ARCH effect with a probability chi-square value greater than 0.05.



DISCUSSION

The result of the analyses of the bound test indicates that there is a long-run equilibrium relationship among the variables in the model. Then, the long-run coefficients of domestic debt, the interest rate on domestic debt and capital expenditure, budget deficit and private sector credit significantly negatively impact economic growth in Nigeria. However, the negative impact of these variables in Nigeria is in line with the findings of a study conducted on the "Effect of Domestic Debt on Economic Growth in Nigeria". This implies that these variables have not been productive over the years under study. The coefficient of the error correction is negative and statistically significant, and this shows that the variables adjust towards equilibrium in the long run. Interestingly, the model did not have serial correlation and heteroscedasticity.

CONCLUSION AND POLICY RECOMMENDATIONS

This study questions the extent to which domestic debt impacted the Nigerian economy from 1980- 2021. In expressing this question quantitatively, the study investigates the impact of domestic debt, interest rate, domestic credit to the private sector and budget deficit on the gross domestic product (a proxy for economic growth). The study also engages various kinds of literature that shape the impact of domestic debts on economic growth over time. The paper discovered that domestic debt, the interest rate on domestic and capital expenditure, private sector credit and budget deficit harms economic growth in Nigeria. This implies that the funds generated through domestic borrowing have been used partially to finance government expenditures, which contributes to the growth rate of GDP. The paper recommends that the Debt Management Office sit up to its responsibilities of advising the government of the effect of continuous deficit financing of projects without real investment in productive projects to show for it in the economy. More so, the rise in the domestic debt profile in Nigeria is attributable to government extra-budgetary activities, which most often are not used for the intended project, and commitment to the provisions of the budget and fiscal discipline should be encouraged on the part of the government and its agencies.

Policy Implication

It is believed that debt contributes to the development of a nation if used effectively. Thus, there is a need for an improvement in the utilisation of domestic debt as it can boost infrastructure that will help create jobs. Domestic debt should be appropriately invested in capital and physical assets that boost national income and create more jobs that improve economic growth in Nigeria.



REFERENCES

- Adams, A.J, Magaji S., Ayo, A.A & Musa I. (2016), This impact of Domestic Debt on Economic Performance in Nigeria (1970-2013), *Journal of Economics and Sustainable Development* 7 (8), 54-64.
- Akhanolu, I. A., Babajide, A. A., Akinjare, V., Oladeji, T., & Osuma, G. (2018), The Effect of Public Debt on Economic Growth in Nigeria: An Empirical Investigation. *International Business Management*, 12(6), 436-441.
- Debt Management Office (DMO) Annual Report (2009)
- Debt Management Office (DMO) Debt profile (2020)
- Dewett, K. K., & Navalur, M. H. (2012). *Modern Economic Theory*. New Delhi: S. Chand & Company LTD.
- Egbetunde, T. (2012). Bank credits and rural development in Nigeria. *International Journal of Finance and Accounting* 2012, 1(3), 45-52.
- El-Yakub, A. B. (2017), An Assessment of the Patterns and Determinants of Public Expenditure and Revenues in Nasarawa State of Nigeria: 1997-2004. *West African Journal of Development Studies (WAJODS)* 1, 134-146.
- El-Yaqub, A. B. (2017), Assessment of Public Financial Management and Fiscal Outcome in Nigeria: An Empirical Investigation: 1990-2015. *West African Journal of Development Studies (WAJODS)* 1, 71-102.
- Engle, R. & Granger, C. (1987), Co-integration & Error Correction: Representation, Estimation and Testing. *Econometrical*, 55, 251-276.
- Ewubare, D., Nteegah, A. & Okpor, G. (2017), Public Borrowing and the Nigerian Economy: An Autoregressive Distributed Lag Model (ARDL) Approach. *The International Journal of Social Sciences and Humanity Intervention* 4(5), 3506-3514.
- Johansson, S. & Juselius, k. (1990), Maximum Likelihood Estimation and Inference on co-integration with Applications to the Demand for Money. *Oxford Bulletin of Economics and Statistics*, 52,169-210.
- Magaji S., & Musa I, (2023), Analysis of the Impact of Banking Sector Credit in the Real Sector. *Asian Journal of Economics and Empirical Research*, 10 (1), 11-19.
- Magaji S., (2000), Nigeria and Foreign Debt: The Desire for Economic Development versus Imperialism, *Journal of Economics and Allied fields*. 1 (1) page; 29-37.
- Magaji S., Darma N.A, and Igwe G.U (2021), Testing the Supply-leading and Demand following Hypothesis for Financial Development and Economic Growth. A case of the Nigerian Banking System, *Global Scientific Journals*, 9(12).
- Odo, S. I., Nwachukwu, J. O., E Agbi, P., & Okoro, T. O. (2016), Analysis of government expenditure and economic growth in Nigeria: Application of Co integration Methodology. *Asian Research Journal of Arts & Social Sciences*, 1(4), 1-17.
- Okwu, A.T., Obiwuru, T.C., Obiakor, R.T. & Oluwalaiye, O.B. (2015), Domestic Debt and Economic Growth in Nigeria: Data-Based Evidence. *Greener Journal of Economics and Accountancy*, 5(1):001-012, <http://doi.org/10.15580/GJEA.2016.1.101516164>
- Omimakinde J.A, and Onifade S.Z (2022), Relationship between Domestic Debt and Economic Growth of Nigeria. *International Journal of Social Science of Human Research*, 5 (6), 2153-2159. D.O.I ; 10.47191/Ijsshr/ V5-26-19
- Onogbosele, D. O., & Ben, M. D. (2016), The impact of domestic debt On Economic Growth of Nigeria. *Asian Research Journal of Arts & Social Sciences*, 1 (3), 1, 13.
- Opara I.V, Nzotta S.M and Kanu S.J (2021) Nigeria's Domestic Public Debt and Economic Development Science and Business Administration 7 (5), 7-22



-
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, 16(3), 289-326.
- Philips P, and Harsen B (1990) Statistical influence in Instrumental variables Regression with I (1) processes. *Review of Economic Studies* 57(1), 99-125
- Victoria, O. I., Mbadike, N. S., & Ikechi, K. S. (2021). Nigeria's domestic public debts and economic development. *International Journal of Management Science and Business Administration*, 7(5), 7-22.
- World Bank & IMF(2001). *Developing Government Bond Markets a handbook*". Washington World Bank