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Impact of Public Debt on National Development in Nigeria: Evidence from 1986 – 2022

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Abstract

The Impact of Public Debt on National Development in Nigeria (1986-2022). This study employs quantitative research for the empirical assessment. The study adopts the ex-post facto. Ordinary Least square (OLS) were used to analyse the long-run relationships between the variables. The data for the analysis were sourced from Central Bank of Nigeria (CBN), Debt Management Office (DMO), National Bureau of Statistics (NBS), International Monetary Fund (IMF) and World Bank using the he time series data spans from 1986 to 2022. The variables included are domestic debt, external debt, exchange rates and the Human Development Index (HDI) as a proxy for national development. The study revealed that, domestic debt has a positive effect, and it is statistically significant on national development in Nigeria, which means that, a 1% increase in domestic debt resources resulted in a 21% increase in the HDI. However, external debt and exchange rate fluctuations have negative and positive impacts on national development respectively, furthermore, a 1% increase in external debt resources resulted in a 1% decrease in HDI by 16 per cent and a 1% rise in the exchange rate resulting in a 4% decrease in HDI. The study concluded Public Debt has impacted on National Development in Nigeria. The study recommends that the Federal Government of Nigeria shift towards domestic borrowing in order to achieve development targets and policy measures that will curb excessive external borrowing and exchange rate fluctuations to ensure that public debt management enables Nigeria to achieve its national development and economic sustainability.

Keywords: Public Debt, National Development, Domestic Debt, External Debt, Exchange Rate Fluctuations.

Introduction

Public debt, defined as the total amount of money that a government owes to external creditors and domestic lenders, has been a pivotal instrument in Nigeria's economic strategy since its independence in 1960. Initially, the country relied on external borrowing to finance infrastructure projects and stimulate economic growth. However, the 1980s marked a significant escalation in Nigeria's debt profile, particularly between 1986 and 1993, when external debt surged, leading to persistent debt servicing challenges.

Globally, the relationship between public debt and economic development has been extensively studied. Reinhart and Rogoff (2010) argue that high levels of public debt can impede economic growth, especially when debt surpasses a certain threshold relative to

GDP. In the African context, Matandare and Tito (2018) examined Zimbabwe's public debt and found a negative correlation between external debt and economic development, suggesting that excessive borrowing can stifle economic progress.

Focusing on Nigeria, several empirical studies have investigated the impact of public debt on national development. Abula and Ben (2016) analyzed data from 1986 to 2014 and discovered a long-term relationship between external debt stock, domestic debt stock, and economic development, as measured by GDP per capita. Similarly, Elom-Obed et al. (2017) conducted a study covering 1980 to 2015, revealing that external debt had a significant negative effect on economic growth during that period.

Recent statistics underscore the magnitude of Nigeria's public debt. As of the fourth quarter of 2022, the country's total public debt stood at N46.25 trillion (approximately US$103.11 billion), reflecting a 4.96% increase from the previous quarter. Of this total, external debt accounted for N18.70 trillion (US$41.69 billion), while domestic debt was N27.55 trillion (US$61.41 billion). Furthermore, Nigeria's external debt constituted 11.9% of its nominal GDP in 2023, up from 8.9% in 2022, indicating a growing reliance on external borrowing.

The implications of this escalating debt burden are multifaceted. On one hand, public debt can finance critical infrastructure projects that spur economic development. On the other hand, excessive debt levels can lead to substantial debt servicing obligations, diverting resources from essential sectors such as education and healthcare. For instance, in 2023, Nigeria's total debt service payments amounted to a significant percentage of its Gross National Income (GNI), highlighting the strain on the nation's finances.

This study, therefore, seeks to examine the "Impact of Public Debt on National Development in Nigeria: Evidence from 1986–2022."

Statement of the problem

Before public debt became a key fiscal tool in Nigeria, the country faced significant developmental challenges, including poor infrastructure, low human capital, weak industrialization, high unemployment, and poverty. Over 40% of Nigerians live below the poverty line (World Bank, 2020), and Nigeria ranks low (161 out of 191) on the Human Development Index (UNDP, 2022). Public debt is often viewed as essential for financing development projects and stimulating growth, yet its long-term impact on Nigeria's development remains understudied.

Existing research presents conflicting findings. Some studies, like Omodero and Alege (2021), suggest public debt harms economic development, while Iroegbu and Uchenna (2019) argue excessive debt crowds out investment. Conversely, Adegbite et al. (2020) and Nwanne (2021) contend that debt can boost infrastructure and output if managed properly and directed toward productive sectors. However, Onuoha and Okere (2022) highlight how debt servicing diverts resources from development. These mixed results indicate a gap in comprehensive long-term analysis, particularly in assessing both internal and external debt

components. Additionally, no prior study has employed a multi-variable approach spanning 1986–2022.

This study examines whether public debt's effect on Nigeria's national development has been positive, negative, or negligible over time. It analyzes three debt-related variables (external debt, domestic debt, and exchange rates) and five development indicators (National Development such as; GDP, infrastructure development index, HDI, unemployment, and poverty rates). By addressing this gap, the research aims to provide a clearer understanding of how public debt influences Nigeria's long-term development trajectory.

The main objective of this study is to examine the impact of public debt on national development in Nigeria from 1986-2023. The specific objectives are to:

Examine the extent to which domestic debt has impacted national development in Nigeria. Evaluate the impact of external debt on national development in Nigeria. Investigate the extent to which exchange rates have impacted national development in

The following research questions will guide the study; to what extent has domestic debt impacted national development in Nigeria? What is the impact of external debt on national development in Nigeria? To what extent have exchange rates impacted national development in Nigeria?

(i) Ho1: Domestic debt has no statistically significant impact on national development in Nigeria. (ii) Ho2: External debt has no statistically significant impact on national development in Nigeria. Ho3: Exchange rates have no statistically significant impact on national development in Nigeria.

Literature Review

Conceptual Clarifications

Any government debt to citizens or businesses within the country is called domestic debt. It can be in the form of currency issued in the country or in any other currency, and it is subject to domestic law. As Ito and Rodriguez observed, domestic debt tends to be owned by both residents and non-residents— different people, but a large share comprises local currency debt with residents. Ajayi and Edewusi, in addition to this, define domestic debt as the money borrowed from the residents with the help of instruments such as treasury bills and bonds. This type of borrowing is critical in supporting government agencies and development work, especially in states characterised by inadequate external borrowing. It is also important to control domestic debt to prevent it from threatening fiscal health. According to Mawejje and Odhiambo, the government's recurrent expenditures tend to be constantly underfunded. Domestic borrowing is often used to bridge this gap; however, this could be disadvantageous as it may starve private investors of needed funds due to rising interest rates. There is a need for proper strategies in place to prevent adverse effects of such borrowing on investments of the private sector and future growth of the economy. External debt is defined as the amount of money owed to international avails or external

avails by residents of a nation with a nation due to investors, known universally and foreign institutes, since funds in their domestic countries are not included.

According to Omotor (2021), external debt is a concept that embraces the history of a country's debt-orientation, borrowing, and repayment, respectively, whose understanding is crucial in determining economic stability, the exchange rate, or performance in the global credit market. External debt is characterised by Mijiyawa (2022) as foreign borrowing by a country, including the public and private sectors borrowing from outside entities. Such debts are usually incurred by third world nations such as Nigeria to buffer budgets for outside development and construction projects, but proper control of these debts is vital to prevent bankruptcy. Nonetheless, external borrowing is not devoid of disadvantages, which chiefly arise from fluctuations in exchange rates and the high cost of servicing the debt. Excess external borrowing is, according to Chindengwike (2022), dangerous because it will stretch government resources and decrease investment in vital areas of development such as health and education. Domestic resource mobilisation seems to be a possibility that reduces the risk associated with poorly managed external borrowing. The exchange rate metric refers to the worth of the currency of a country in relation to another one, with great importance being attached to this indicator when it comes to estimating the standing of a country in the competitive arena in the international economy. The exchange rate is referred to by Supriani and Fianto (2020) as a macroeconomic variable that is structurally dependent on demand and supply in floating exchange rate systems or controlled by central banks in fixed exchange rate systems. However, exchange rate variability can affect trade, inflation, and a country's capacity to repay its foreign obligations. Changes in the exchange rate may have also impacted FDI and import and export prices, which in turn affect development. As noted by Pantelopoulos (2020), without a stable exchange rate, investors' confidence is difficult to maintain, and so is the stability in the economy. Over and above, Morina et al. (2020) explain that if the exchange rate goes up and down (volatility), then such behaviour in any market creates anxiety; hence, people do not commit their resources long-term, thus delaying development.

Theoretical Review/Framework

Debt Sustainability Theory

The Debt Sustainability Theory is an economic concept promoted by Ferrarin et al. (2012) and further developed by the International Monetary Fund (IMF) and the World Bank from the 1990s to date. DST is based on the idea that if a country can meet its debt obligations without restructuring or rescheduling them and without undermining economic stability, then such a government is said to have sustainable debts. A key principle of the DST is the use of the debt-to-GDP ratio as an economic indicator of a country's fiscal health and, by implication, its debt sustainability (Debt Sustainability Theory, 2012). DST is particularly relevant for understanding Nigeria, given its growing external debt, the need to service such debt, and the related debate on the implications for national development in the long run.

It adopts a structured and standardised approach to assessing whether Nigeria's current borrowing trajectory is sustainable, based on an analysis of the debt-to-GDP ratio and other fiscal indicators and a decision on whether or not Nigeria's debt levels could eventually undermine socioeconomic growth.

But the DST has also come under several criticisms. One is that it maintains a technical, apolitical, and ahistorical standpoint on debt sustainability. The theory, in the words of Bohn (2007), focusses narrowly on the underlying economic indicators, such as the debt-to-GDP ratio, and fails to consider the political, institutional, and social aspects of debt management capacity. More importantly, the DST seeks to determine debt sustainability by making assumptions about the future growth of the economy and the interest rate — both of which are often unpredictable and result in faulty predictions of debt sustainability. Finally, and perhaps most crucially, the DST does not provide a single, universally acceptable, and precise way to determine whether a country's debt is "sustainable" or not.

Notwithstanding these criticisms, the theory is still applicable to Nigeria. It clearly stipulates that it is important for any country to maintain a stable debt-to-GDP ratio and a sustainable fiscal balance, thus enabling the country to achieve sustainable development. By using the Debt Sustainability Theory, Nigeria's policymakers would have a deeper understanding of potential macroeconomic risk arising from rising debt levels. Such knowledge could enable policymakers to take preventive measures and avoid a situation in which unsustainable debt accumulation can contribute to stifling national development (Ojo & Ojo, 2022).

Crowding Out Theory

The theory, developed by the American economist Richard Musgrave in 1959, was that when governments borrow too much, they compete with the private sector for scarce financial resources. Such competition drives up interest rates. As interest rates rise, it becomes more costly for businesses to borrow money to finance investment, which reduces investment in the private sector. This distortionary effect of government borrowing is known as 'crowding out'. It can reduce growth in the long term. According to Crowding Out Theory, when the Nigerian government relied on domestic borrowing to finance budget deficits, it responded to the pandemic by issuing two bonds in the same year. If the government borrows more domestically, it would raise interest rates on government bonds and make it more difficult for private businesses to borrow money at a reasonable cost. This crowding out of private sector investment could stifle economic growth and slow national development in targeted sectors of the economy, such as infrastructural and manufacturing industries (Ajayi & Edewusi, 2020).

While the Crowding out Theory is important in understanding the relationship, studies have shown significant criticism. According to Keynesian economists, at times, there might exist a 'crowding-in' effect where public spending on infrastructure and other projects boosts private sector investment by opening up new market opportunities for businesses. Moreover, the theory makes no mention of net benefits in the long run that government

borrowing could yield when they're put to productive use, like in education and healthcare, which would boost future economic growth. (Akinlo & Egbetunde, 2013)

While these criticisms are well-placed, the Crowding Out Theory is still useful for thinking about the Nigerian situation. Although the government has been borrowing heavily from domestic markets, there is a possibility that this lending could crowd out private investment – a source of sustainable development. By drawing on the Crowding Out Theory, the Nigerian policymakers can help them understand the trade-offs between their borrowing needs and private sector growth. They can also figure out the mechanisms for reducing crowding-out effects (Mawejje & Odhiambo, 2020).

Ezenwobi and Anisiobi (2021) analysed the effect of government borrowing on economic development in Nigeri'a. Using HDI as a proxy to measure national development, the study analysed the impact of both external and domestic debt on the economy of Nigeria from 1990 to 2020, using multiple regression and unit root tests. The authors concluded that bothexternal and domestic debt have a positiveve effect on economic development in Nigeria,, while interest ratess have the contrary negative impact. Different measures towards ainability in borrowing should be enforced while the issue of interest ratess should be improved for efficient development outcomess.

Chanda (2022) analysed "Public Debt Servicing and Its Impact on Economic Growth in Zambia". Annual time series data of 31 years ranging from 1990 to 2019 had been deployed for the study using an ARDL model to measure the short- and long-run impacts of public debt service on GDP. According to the study,udy, domestic debt service has a positive effect on economic growth,, while external debt service has a negative impact. Based on the study, it concluded that the country must develop a goal-orientateded and prudent approach towards servicing their external debts along with the focus on channelising borrowed funds to investment that fosters long-run growth and human development.

Mezni and Djebali (2023) examined external debt and the Humanuman Development Index: A Case Study of the MENA Region'ss MEDES. The HDI was regressed on external debt with panel data analysis, where information was obtained from the World Bank and the World Health Organisation. There was a negative relationship between external debt and HDI. Excessive external borrowing restricted investment in education, health, and infrastructure, which is key to human development. In their research findings and recommendations, the authors propose that it is essential to strengthen the internal revenue base and minimise external borrowing to secure better human development outcomes.

Farooq et al. (2023) conducted research related to public debt components and their impact on economic growth in Pakistan. This is an important issue to be addressed in Pakistan. Recently, the policy makers and economists have drawn interest on the impact of different components of public debt. This paper is aimed at examining the impact of domestic and external debt, two of of the main components of the public debt in Pakistan, on economic growth. The results of the research revealed that domestic debt had some positive impact on national development but external debt, corruption and indebtedness, whereas the

impact of external debt was found significant and negative. The reason behind this is that the cost incurred on servicing of external debt is rather high, and it is diverting the national resources to be used for external payment purposes. Therefore, the recommendations of the researchers were to primarily focus on domestic borrowing for development projects to reduce the dependence on external borrowing.

One study by Asravor et al. (2023) called Influence of Domestic Debt on National Development: Evidence from Ghana used the HDI as a measure of national development. They came to the conclusion that domestic debt helped development by lending money for projects that would improve the country. The study further recommended that the loaned funds should be used to finance development projects and that debt management systems should be made more efficient so as not to engage in fiscal irresponsibility by taking on excessive borrowing. The findings also recommended that domestic debt, as opposed to external borrowing, should be prioritised when funding development projects. This is because domestic debt, as a general rule, brings lower risk as part of the debt-management process.

Ugomma and Chinedu's (2024) study examined exchange rates and their effect on Nigeria's GDP for the period of 2001 to 2012. The research mainly explored how exchange rate fluctuations and variations affect GDP and national development. Their analysis revealed that the increase in the exchange rate in Naira has a negative correlation with the growth of the economy. The authors would recommend various measures to ensure the stability of the exchange rate and get our economy in shape.

The reviewed studies collectively explore the impact of government borrowing (domestic and external debt) on economic development, measured through indicators such as GDP growth and the Human Development Index (HDI). While some studies suggest that domestic debt positively influences development, others highlight the adverse effects of external debt due to high servicing costs and resource diversion.

Comparative Summary Table

Study	*Country/Region*	*Key Variables*	*Methodology*	*Findings on Domestic Debt*	*Findings on External Debt*	*Policy Recommendations*
Ezenwobi & Anisiobi (2021)	Nigeria	HDI, Debt, Interest Rates	Multiple Regression, Unit Root Tests	***Positive effect***	***Positive effect*** (but interest rates harmful)	Improve debt sustainability, manage interest rates
Chanda (2022)	Zambia	GDP, Debt Servicing	ARDL Model	***Positive in short & long run***	***Negative impact***	Prioritize domestic borrowing, invest borrowed funds wisely
Mezni & Djebali (2023)	MENA Region	HDI, External Debt	Panel Data Analysis	N/A	***Negative effect*** (reduces education/health spending)	Strengthen domestic revenue, limit external borrowing
Farooq et al. (2023)	Pakistan	GDP, Domestic/External Debt	Regression Analysis	***Mild positive effect***	***Significant negative effect*** (due to high servicing costs)	Focus on domestic borrowing, curb corruption
Asravor et al. (2023)	Ghana	HDI, Domestic Debt	Regression Analysis	***Boosts development***	N/A	Improve debt management, avoid excessive borrowing
Ugomma & Chinedu (2024)	Nigeria	GDP, Exchange Rates	Time Series Analysis	N/A	***Exchange rate instability worsens debt impact***	Stabilize exchange rates, prudent borrowing

The literature broadly agrees that domestic debt is less harmful (and sometimes beneficial) compared to external debt, which often hinders growth due to servicing burdens and exchange rate risks. However, context matters countries with strong institutions and efficient debt management may handle external borrowing better. Future research should explore structural reforms and alternative financing mechanisms to reduce dependency on debt-driven growth.

Gaps in Literature Review

Despite their importance in the body of knowledge on debt and the economy, the studies by Okon et al. (2020) and Ezenwobi and Anisiobi (2021) are limited to the examination of only economic development (proxied by gross fixed capital formation and the Human Development Index [HDI], respectively), without providing a holistic assessment of the debt nexus from a more social sciences perspective. Although both studies gave an insight into the intensity of the relationship between public debt and economic development in the study periods, they failed to examine the wider socio-economic implications of debt on the long-run national development outcomes, such as the impact on poverty reduction,

inequality and social infrastructure. Meanwhile, Chanda (2022) and Mezni and Djebali (2023) examined the relationship between debt servicing and borrowing on human development in Zambia and the MENA regions, respectively, but without closely looking at the nexus between debt management practices and sustainable development outcomes in Nigeria.

Additionally, the studies mainly dwell on the influence of these types of debt (domestic or external) as having positive or negative influences, but there is a paucity of analytical findings on how these costs, particularly in Nigeria, accrue to spending on health education and infrastructure over time. Lastly, the techniques chosen for the studies, like ARDL and panel data analysis, are helpful for short- or long-term relationships but do not necessarily establish the complex, multidimensional effects of debt on national development beyond the regular measurement of economic development, either using GDP or HDI, and therefore more holistic models could be accommodated that factor in broader indicators of socio-economic wellbeing.

Methodology

This study employs quantitative research for the empirical assessment of the influence of public debt on national development in Nigeria between 1986 and 2022. In this regard, the study adopts the ex-post facto design since it is a quantitative study that depends on already collected and recorded historical data. This design is appropriate for this study since it allows the researcher to investigate the relationship between independent variables (like domestic debt, external debt and exchange rate) and the dependent variable (which is national development measured by human development index).

The analysis is based on secondary data sourced from Central Bank of Nigeria (CBN) report ((2023), Publication report from Debt Management Office (DMO) (2023), National Bureau of Statistics (NBS), International Monetary Fund (IMF) and World Bank. The time series data spans from 1986 to 2022. The variables included are domestic debt, external debt, exchange rates and the Human Development Index (HDI) as a proxy for national development. One major benefit of utilising secondary data is that it allows for the investigation of long-term relationships and trends.

Sources of Data:

Data on Domestic and External Debt: sourced primarily from the Debt Management Office's annual reports and the Central Bank of Nigeria's Statistical Bulletins. Exchange Rates: exchange-rate data are from the IMF and the Central Bank of Nigeria. HDI: HDI were extracted from the UNDP and the World Bank databases.

Model Specification:

To investigate the relationship between public debt management and national development, this study adopts a multiple linear regression model. The Human Development Index (HDI) is used as the dependent variable, representing national

development. The independent variables are domestic debt, external debt, domestic debt servicing costs, external debt servicing costs, and the exchange rate. The model is specified as follows:

$HDI = \alpha + \beta_1(\text{Domestic Debt}) + \beta_2(\text{External Debt}) + \beta_3(\text{Exchange Rate}) + \varepsilon$ ---------- eq(i)

Where:

HDI = Human Development Index (proxy for national development)

Domestic Debt = Total domestic debt as a percentage of GDP

External Debt = Total external debt as a percentage of GDP

Exchange Rate = The average exchange rate of the Nigerian naira to the US dollar

α = Intercept

β_1, β_2 and β_3 = Coefficients of the independent variables

ε = Error term

Estimation Technique:

The study employed the Ordinary Least Square (OLS) to analyze the long-run relationships between the variables. OLS is suitable for this analysis because all the underlying variables were stationary at level, I(0). The analysis justifies the selection of Ordinary Least Squares (OLS) over alternative methods like ARDL for long-run analysis due to its suitability for the specific dataset and research objectives. While ARDL is often preferred for cointegration analysis in the presence of mixed-order integration, OLS is deemed appropriate here because it provides consistent estimates under the given conditions, particularly when the focus is on long-run relationships without short-term dynamics. Below is the summary of the stationarity test:

Result and Discussion

Table 3.1:

Summary of Unit Root Test (Stationarity Test)

S/N	Variable Name	t-Stat (cal)	t-Stat (tab)	Prob	Remark
1	Human Development Index (HDI)	-4.48397	-2.957110	0.0000	Stationary @ Level
2	Domestic Debt (DMD)	3.97466	-2.948404	0.0000	Stationary @ Level
3	External Debt (EXD)	-3.64635	-2.948404	0.0001	Stationary @ Level
4	Exchange Rate (EXR)	3.372004	-2.945842	0.0009	Stationary @ Level

Source: Author's Computation using E-view 12, 2024

Table 3.1 gives the result of the stationarity test. The aim of the test is to figure out whether the variables Human Development Index (HDI), Domestic Debt (DMD), External Debt (EXD) and Exchange Rate (EXR) are stationary at the level (level = 0). These variables are critical in determining the stationarity. The variables being stationary at the level is estimated using the Augmented Dickey-Fuller (ADF) test as shown in Table 3.1 below with the calculated t-statistics (t-Stat (cal)), tabulated critical t-values (t-Stat (tab)) at the 5% significance level and probability (Prob). HDI: The calculated t-statistic of – 4.48397 is less

than the tabulated critical t-value of – 2.957110, with probability value of 0.0000. Hence, it may be concluded that the HDI is stationary at level, i.e. HDI does not contain unit root and is stationary. DMD: The calculated t-statistic of 3,97466 is greater than the tabulated critical t-value of -2.948404, with probability value of 0.0000. Thus, DMD is stationary at level and DMD does not contain unit root. External Debt (EXD) the calculated (t-statistic) -3.64635 is less than tabulated critical t-value -2.948404 and (p-Value) 0.0001. EXD is stationary at the level. External Debt (EXD) has no unit root

Exchange Rate (EXR). The calculated (t-statistic) 3.372004 is greater than tabulated critical t-value -2.945842 and (p-Value) 0.0009. EXR is stationary at the level. Exchange Rate (EXR) has no unit root. From this t-test results and probability values, we can concluded that the null hypothesis of non-stationarity can be refused at the 5% significance level for the variables. The probability values for the variables are less than the 0.05 significance level. This means that the variables are stationary at the level. The stationarity of these variables is very a crucial assumption in any econometric studies and should be fulfilled in order to ensure that any inferences made from the statistical analysis are valid. This is a fundamental assumption built into the OLS regression model. Since all the variables used in the regression are in the level form, they need to be stationary. Otherwise, if they are non-stationary, the OLS regression will produce spurious regression results in which the calculated relations are statically significant but are actually spurious. Therefore, if the Unit Root Test results suggest that all the variables are stationary at level, it provides a justification for the use of OLS regression in the next stage of analysis.

Table 3.2:

Summary of Ordinary Least Square Regression (OLS) Results

S/N	Variable Name	Coefficient	Std Error	t-Stat	Prob
1	Domestic Debt (LNDMD)	0.209324	0.010761	19.452095	0.0040
2	External Debt (LNEXD)	-0.160634	0.006665	-24.101125	0.0248
3	Log Exchange Rate (LNEXR)	-0.037046	0.013381	-2.768550	0.0101
	R^2= 0.716437, Adjusted R^2 = 0.696333 Durbin Watson Statistic = 2.012859 Prob(F-statistic)= 0.0000				

Source: Author's Computation using E-view 12, 2024

The R-squared of 0.716437 for the regression model in table 3.2 indicates that the independent variables added in the model (domestic debt, external debt and exchange rate) accounted for 71.64% of the variation in the dependent variable (HDI, a proxy for National Development). The slightly lower adjusted R-squared of 0.696333 indicates a reasonably strong fit for the model after accounting for the number of predictors (independent variables). The Durbin-Watson statistic (2.012859) is close to 2, the ideal

value, suggesting there was no evidence of autocorrelation in the model residuals. The overall model is statistically significant, as indicated by the p-value for F (0.0000), which suggested the rejection of the null hypothesis that all the regression coefficients are simultaneously equal to zero. Domestic Debt (DMD) has a positive coefficient of 0.209324 which is statistically significant at the 0.004 level. this implies that a 1%increase in domestic debt is associated with a 21% increase in National Development in Nigeria, holding other things constant within the period under review.

External Debt (EXD) has a negative coefficient of -0.160634 and statistically significant at the 0.0248 level. this implies that a 1% rise in external debt is associated with 16% decrease in National Development in Nigeria, holding other things constant within the period under review.

Finally, EXR (exchange Rate) has a negative and significant coefficient of -0.037046 at the 0.0101 level, below the benchmark of 5% significant. This means that an1%increasein the exchange rate is associated with an4%decrease in National Development in Nigeria in the period under review, all things being kept constant. Overall, the regression results indicate that domestic debts have a positive and significant effect on national development, while external debts and exchange rate have a negative and significant effect on national development in Nigeria in the period under review.

The study employed Ordinary Least Squares (OLS) regression to analyze the long-run relationships between key variables—Human Development Index (HDI), Domestic Debt (DMD), External Debt (EXD), and Exchange Rate (EXR)—all of which were confirmed to be stationary at level I(0) via the Augmented Dickey-Fuller (ADF) test. Stationarity is critical to avoid spurious regression results in OLS.

The ADF test showed:

HDI: t-stat (-4.48397) < critical value (-2.957110), p = 0.0000 → stationary.

DMD: t-stat (3.97466) > critical value (-2.948404), p = 0.0000 → stationary (unconventional).

EXD: t-stat (-3.64635) < critical value (-2.948404), p = 0.0001 → stationary.

EXR: t-stat (3.372004) > critical value (-2.945842), p = 0.0009 → stationary (unconventional).

Despite the positive t-statistics for DMD and EXR (which typically suggest non-stationarity in ADF tests), the p-values < 0.05 led to rejecting the null hypothesis of non-stationarity. This inconsistency may stem from model specifications (e.g., inclusion of trend/constant) but was overlooked in the analysis.

The OLS results revealed:

Domestic Debt (DMD): Positive effect on HDI (coefficient = 0.209, p = 0.004).

External Debt (EXD): Negative effect (coefficient = -0.161, p = 0.025).

Exchange Rate (EXR): Negative effect (coefficient = -0.037, p = 0.010). The model had strong explanatory power (R^2 = 0.716) and no autocorrelation (Durbin-Watson ≈ 2).

Rationale for OLS over ARDL: Since all variables were I(0), OLS was deemed appropriate. ARDL is typically used for mixed I(0)/I(1) data, but here, strict stationarity justified OLS. However, the unconventional ADF results (positive t-stats) cast doubt on the stationarity conclusions, potentially undermining the OLS validity. A robustness check (e.g., Phillips-Perron test) or ARDL cointegration analysis might have been warranted.

Discussion of Findings

The findings of the study are enlightening concerning the impact of public debt on national development in Nigeria from 1986 to 2022. This section explains the findings as follows:

Domestic Debt and National Development:

The result shows that domestic debt (DMD) has a positive and statistically significant relationship with national development as proxied by HDI. The coefficient of domestic debt (0.209324) indicates that a 1% increase in domestic debt will increase national development by 21%. This result corroborates with Asravor et al. (2023) who found the positive impact of domestic borrowings on economic growth, which also means growth and development at national levels, given that economic growth translates into national development when it is utilised productively. While domestic debt has a positive impact on national development, the impact might, however, be dependent on the efficient utilisation of the borrowed funds for developmental projects.

External Debt and National Development:

Again, the study examined "External debt (EXD)." A negative and significant coefficient of −0.160634 is observed, meaning that a 1% increase in external debt has a 16 per cent negative impact on national development. This corroborates Mezni and Djebali's (2023) arguments that external debt often strangles developing economies with large debts, such as the case of Nigeria, because of the tendency of the developing countries to incur debts at exorbitant rates with unfavourable terms and conditions that can build up to unsustainable debt servicing costs. This could potentially crowd out public expenditure allotted for health, education and other essential sectors needed for national development. In Nigeria's case, these damages might be further compounded by poor management and implementation of projects; corruption and diversion of funds for development-oriented projects. The findings of the study suggest that the use of external debts could possibly be weighed carefully, and if used, should be tightly managed to avoid negative development outcomes in the long run.

Exchange Rate and National Development:

The exchange rate (EXR) also has a negative and statistically significant effect on national development, with a coefficient of -0.037046. A 1% increase in the exchange rate (1% depreciation in the naira) on the contrary, implies a 4% decline in national development. This result is consistent with the findings of Ugomma and Chijioke (2024), who noted that

"fluctuations in the exchange rate in Nigeria have an important impact on economic stability and development of the country". Depreciation in exchange rates may increase the cost of servicing external debts and of importing some basic goods, which ultimately reduce the people's living standards and hinder national development. The negative impact of exchange rate depreciation is of particular relevance when we discuss the external debt. As the Nigerian naira depreciates, the cost of repaying external debts, denominated in hard currency, increases.

Moreover, the R-squared value of the model (0.716437) shows that 71.64% of the cumulative variation in national development (HDI) can be accounted for by the independent variables: domestic debt, external debt and the exchange rate. The Durbin-Watson estimate of the model (2.012859) indicates the absence of autocorrelation in the model. This implies that the regression results are reliable. Specifically, the findings of the study indicate that domestic debt has a positive functional relationship with national development. External debt and exchange rate depreciations, on the other hand, have a negative functional impact on national development.

Considering the findings of this study, there is evidence to suggest that prudent domestic borrowings policy, as well as avoidance of excessive external borrowings, especially in an environment of exchange rate instability are essential for the success of the undergoing public debt management reform in Nigeria.

Conclusion and Recommendations

The discourse revealed in most cases that domestic debt achieved its desired goals of promoting national development when it was properly managed. Thus, the result corroborates the idea that in managing public debt, Nigeria's borrowing policy should be skewed towards domestic debt to promote domestic development. Of course, the destabilising impact of exchange rate and external debt depicts the significance of keeping external debt at a minimum, while stabilising the exchange rate through appropriate macroeconomic policies. Thus, it is evident that the need for improved debt management practices for the purpose of enhancing sustainable national development cannot be overemphasised. The results of the study prompted the following recommendations:

Prioritize Domestic Borrowing for Development-Oriented Projects:

As the value of domestic debt coefficient >0 moving the domestic debt to the right has a positive direct effect on national development from the value of 20.9324, the Nigerian government should gravitate towards domestic borrowing more than borrowing externally for development projects. Domestic borrowing can serve as a cheap source of fund for developmental projects if well managed and devolved for development, which is an indicator for social economic transformation. The money borrowed should be properly audited to ensure that it is not lost; instead, it should be channelled to sectors with the highest productivity such as infrastructure, health and education.

Exercise Caution with External Borrowing:

The negative effect of the state indebtedness value of -0.160634 implied in the model that the continuous accumulation of external debt by any country could be a factor inhibiting it from attaining the desired level of development, as a countries development is largely linked to the ability of the government to embark on developmental projects and thus enhance the living standard of the people. The right approach by government of Nigeria and any country should be a very cautious approach to external debt accumulation. External borrowings if any should be considered only if it comes with either little or no interest, long-term repayment plan and associated with a project that would aid development in the country, and also the servicing of the external debt should not take too much of the national budget that could have been used in funding the key sectors of any economy

Stabilize the Exchange Rate to Reduce Economic Volatility:

The results illustrate. Its coefficient is negative and significant at -0.037046. This shows that volatility in exchange rate is bad for national development. This influence is negative and thus very significant at -0.037046. Exchange rate volatility is bad for national development. To be able to stabilise the Nigerian currency and control the negative effects of exchange rate voliatility, the government and the central bank of Nigeria have to come up with policies and strategies. Some of these policies may include; reduction in oil dependency and diversifying the economy to other sources of revenue. Good exchange rate management as well as strengthening of the naira should also have top priority. Lastly the country's government should take steps to open up market spaces for foreign investors. Stabilising the exchange rate in Nigeria will reduce the cost of servicing external debt and create a more conducive macroeconomic environment for national development.

Limitations of the Study

The study has several limitations that affect its comprehensiveness and generalizability. First, it narrowly focuses on domestic debt, external debt, and exchange rate as determinants of national development (proxied by HDI), omitting other critical factors like inflation, fiscal policy, governance quality, and corruption. While HDI is a widely accepted measure, it may not fully capture all development dimensions, such as infrastructure, industrialization, and income inequality. The study's time frame (1986–2022) includes significant economic shifts but may not fully account for structural breaks and policy changes. Data reliability is another concern, as reliance on secondary sources like the CBN, DMO, and World Bank could introduce inconsistencies due to methodological revisions or reporting discrepancies. Methodologically, the use of OLS regression assumes linear relationships, ignoring potential nonlinearities, threshold effects, or asymmetric impacts. Additionally, the study did not address endogeneity issues, such as reverse causality, or fully account for structural breaks in unit root testing. The findings are also context-specific to Nigeria, limiting their applicability to other developing economies.

Future Research Directions

To enhance robustness, future studies should incorporate additional variables like inflation, governance indicators, and sectoral debt impacts. Advanced econometric techniques, such as VAR, threshold regression, and panel data analysis, could better capture dynamic interactions and debt sustainability limits. Nonlinear and asymmetric effects of debt should be explored, along with disaggregated debt analysis by maturity, creditor type, and usage. Research could also assess debt servicing burdens and employ comparative case studies with peer economies like Ghana and South Africa. Supplementing quantitative analysis with qualitative methods, such as expert interviews, would provide deeper insights. Finally, extending the study beyond 2022 to evaluate recent policy shifts (e.g., COVID-19 debt, subsidy removal) would offer more updated recommendations for Nigeria's debt and development strategies. Addressing these gaps would yield more comprehensive policy insights.

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