

Burden of Public Debt as a Constraint on Nigeria's Economic Development

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Abstract

The study examined the effect of public debt on the economic development of Nigeria, with the specific objectives of assessing the effect of domestic debt, foreign debt, and debt service on the Human Development Index (HDI). The study adopted an ex-post facto research design, focusing on historical data covering the period from 1999 to 2023. Secondary data were collected from the Central Bank of Nigeria Statistical Bulletin, Debt Management Office reports, National Bureau of Statistics, and United Nations Development Programme reports. Ordinary Least Squares regression was employed in testing the hypotheses. The findings revealed that: domestic debt has a negative but non-significant effect on human development index of Nigeria ($\beta = -0.019818$, $p = 0.7724$); foreign debt has a positive and significant effect on human development index of Nigeria ($\beta = 0.203998$, $p = 0.0425$); debt service has a negative and significant effect on human development index of Nigeria ($\beta = -4.678274$, $p = 0.0005$). In conclusion, regardless of the developmental potential of borrowed funds, the continuous outflow of financial resources in the form of debt servicing erodes gains by limiting the government's fiscal space to sustain improvements in living standards. The study recommends that lawmakers should prioritize enacting fiscal policies and frameworks that reduce the debt servicing burden by tightening borrowing limits and scrutinizing loan approvals, thereby preventing the diversion of scarce national resources from development-driven programs to excessive debt repayment obligations.

Keywords: Public Debt, Economic Development, Domestic Debt, Foreign Debt, Debt Service

1. Introduction

Economic development remains one of the most pressing challenges for many developing nations, particularly those in sub-Saharan Africa where structural weaknesses and volatile economic environments make sustained progress difficult. Nigeria, as the largest economy in Africa, provides an interesting case study of these challenges. Despite its vast natural and human resources, the country continues to struggle with poverty, unemployment, and low living standards, which are evident in its ranking on global development indices (Nwoye et al., 2023). These issues are compounded by the country's reliance on public debt to finance budgetary deficits and development projects. Over the years, Nigeria has consistently turned to both domestic and foreign borrowing to fund infrastructure, education, healthcare, and other critical sectors of the economy (Amu et al., 2025). While borrowing is not inherently negative, its consequences for economic development, particularly in terms of the human development index (HDI), have raised considerable concern. The HDI, which measures development through health, education, and standard of living, provides a more holistic picture of how debt translates into human welfare rather than just economic growth figures (Ulici, 2020). Therefore, understanding the link between Nigeria's rising debt levels and its human development outcomes becomes essential in evaluating whether borrowing has been a tool for growth or a trap that hinders the nation's progress.

Economic development is often regarded as the primary goal of national policy because it reflects the overall well-being and prosperity of the people (Afure & Ifeanyi, 2024). It goes beyond growth in gross domestic product to include improvements in living standards, literacy, healthcare, and equitable distribution of resources. Public debt plays an important role in this process, as it is frequently used by governments to finance investments when domestic revenues fall short (Ogbonna et al., 2023). Domestic debt, raised through instruments such as government bonds and treasury bills, provides immediate funding for development projects but can also crowd out private sector investment

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if not properly managed. Foreign debt, on the other hand, brings in much-needed external capital and can help stabilize foreign exchange reserves, but it exposes the country to global economic shocks and repayment risks (John, 2023). In Nigeria's case, public debt has grown significantly over the past decades, raising questions about sustainability and its long-term effect on development. Policymakers often defend borrowing on the grounds that it supports infrastructure and social programs, but critics argue that high levels of debt service obligations divert resources away from productive investment in human capital. This dual character of public debt, as both a catalyst and a potential hindrance to development, underscores the importance of examining its real effect on Nigeria's human development (Nwoye et al., 2023).

The relationship between public debt and economic development is complex and multifaceted. When managed prudently, debt can provide the fiscal space needed to finance critical infrastructure and social investments that stimulate growth and improve living conditions (Ofurum & Fubara, 2022). However, excessive or poorly managed debt often leads to economic strain, particularly when a significant portion of national revenue is allocated to servicing the debt rather than funding development initiatives. In Nigeria, rising debt service costs have become a recurring issue, consuming a large share of government revenues and limiting the capacity to invest in education, healthcare, and poverty alleviation programs (Ikwuo et al., 2024). This situation undermines progress in the human development index, which depends on consistent improvement in these areas. Additionally, domestic debt can increase inflationary pressures and limit credit availability to private businesses, while foreign debt exposes the economy to exchange rate volatility and the risk of debt overhang. Debt overhang occurs when accumulated debt becomes so large that future growth is stifled, as investors and policymakers anticipate that any new earnings will be used to pay off existing obligations rather than stimulate new development (Ezenwa-Ohaeto & Umenweke, 2024). Thus, the challenge for Nigeria lies not only in borrowing but in ensuring that such borrowing translates into tangible improvements in human development. By examining the effects of domestic debt, foreign debt, and debt service on the human development index, this study seeks to contribute to the broader debate on whether Nigeria's borrowing practices are advancing or constraining its path toward sustainable development.

Economic development is usually strengthened when governments mobilize resources in a manner that promotes investment in human capital, infrastructure, and social welfare. In such circumstances, public debt is seen as a useful instrument because it provides funding for critical projects that can raise productivity and improve the quality of life (Amu et al., 2025). When borrowing is judiciously managed, it supports economic growth by bridging revenue shortfalls and stimulating investments that lead to higher educational attainment, improved healthcare, and enhanced living standards. In this way, borrowing can contribute positively to a country's human development index, as resources are channeled toward programs that directly improve health, education, and income.

In Nigeria, however, the experience has been different. The country's public debt has continued to rise, with both domestic and foreign borrowings increasing significantly over the years (Ikwuo et al., 2024). Rather than translating into broad-based development, much of the borrowed funds have not been effectively utilized for projects that improve human welfare. Instead, the government faces mounting debt service obligations that consume a large proportion of public revenues, leaving little room for investment in sectors that enhance human development. This has left Nigeria struggling with persistent poverty, high unemployment, inadequate healthcare, and poor educational outcomes despite the huge amounts borrowed (Osinuga et al., 2025). The human development index of Nigeria remains low compared to other countries with similar resource endowments, raising concerns about whether the pattern of borrowing has truly supported meaningful development.

The consequences of this situation are far-reaching. The heavy burden of debt service limits the capacity of government to invest in programs that could raise the standard of living of the population. As resources are diverted toward repayment, spending on health and education is reduced, undermining human capital development. This further entrenches poverty, inequality, and low productivity, while also weakening the ability of the economy to generate sustainable growth (Amu et al., 2025). Moreover, dependence on both domestic and foreign debt exposes Nigeria to financial instability, exchange rate volatility, and the risk of a debt crisis if the burden becomes unsustainable. These challenges have made it difficult for the country to achieve significant progress in its human development index, thereby threatening long-term development aspirations.

1.1 Objectives of the Study

The broad objective of the study is to examine the effect of public debt on the economic development of Nigeria. The following were the specific objectives of the study:

- 1) To examine the effect of domestic debt on human development index of Nigeria.

- 2) To ascertain the effect of foreign debt on human development index of Nigeria.
- 3) To determine the effect of debt service on human development index of Nigeria.

1.2 Research Hypotheses

- H01) Domestic debt has no significant effect on human development index of Nigeria.
- H02) Foreign debt has no significant effect on human development index of Nigeria.
- H03) Debt service has no significant effect on human development index of Nigeria.

2. Literature Review

2.1. Conceptual Review

2.1.1 Public Debt

Public debt refers to the total financial obligations owed by a government to external and internal creditors as a result of borrowing to finance budget deficits and other economic activities (Amu et al., 2025). It is essentially the cumulative amount of money that a government owes, arising when its expenditures exceed revenues, compelling it to seek funds from either domestic or foreign sources (Okezie & Promise, 2025). Public debt is often documented through instruments such as bonds, treasury bills, promissory notes, and loans, which serve as evidence of the government's promise to repay the borrowed funds under agreed terms (Ikwo et al., 2024). This form of debt is not limited to a single period but builds up over time as governments continuously borrow to address developmental projects, service previous debts, or stabilize their economies in times of crisis.

Public debt can be seen as a reflection of the financial capacity of a state, since it provides resources that enable governments to meet obligations beyond the limits of tax revenue and other income sources (Abimboye et al., 2025). It is also sometimes referred to as national debt or government debt, as it represents liabilities borne by the state on behalf of its citizens. Since the government pledges future revenues to repay the borrowed funds, the responsibility for repayment often lies indirectly on citizens through taxes or other levies. In economic terms, public debt illustrates the financial relationships between the government and its creditors, showing how states mobilize capital to achieve short-term and long-term objectives (Afure & Ifeanyi, 2024). Therefore, public debt can be understood as the outstanding obligations of a government which represent claims on its future income and are necessary for sustaining development when revenues are insufficient.

2.1.1.1 Domestic Debt

Domestic debt refers to the portion of public debt that is borrowed by a government from within its own country (Amu et al., 2025). It represents financial obligations owed by the state to residents, local institutions, banks, and corporations that provide funds through the purchase of treasury bills, government bonds, and other financial instruments. Unlike external borrowing, which involves foreign lenders, domestic debt is sourced entirely from citizens and organizations operating in the national economy (Abimboye et al., 2025). Governments often resort to borrowing domestically when tax revenues are insufficient to meet expenditure demands. By issuing debt instruments in the local currency, the government secures funds to finance projects, manage budget deficits, and stimulate economic activities without relying on external creditors (Nwoye et al., 2023). Domestic debt is therefore not only a liability of the government but also an investment opportunity for individuals and institutions seeking safe returns within their own country.

Domestic debt also reflects a unique relationship between the state and its people. Since repayment is made in the local currency, it reduces exposure to exchange rate risks that are common with external debt. It also provides a platform for developing the domestic financial market, as government securities often serve as benchmarks for private sector borrowing and lending. Thus, while domestic debt increases the obligations of the government, it also strengthens the national economy by deepening capital markets and creating opportunities for savings and investment (Okezie & Promise, 2025). Thus, domestic debt can be defined as the financial commitments a government makes to its own citizens and institutions through borrowing. It embodies the government's reliance on internal resources to sustain its fiscal operations, with implications for national savings, interest rates, and economic growth.

2.1.1.2 Foreign Debt

Foreign debt refers to the portion of public debt that a government owes to external creditors, which may include foreign governments, international financial institutions, and private entities outside the borrowing country (Afure & Ifeanyi, 2024). It represents the liabilities of a state denominated in foreign currencies and contracted through loans, bonds, or other credit facilities provided by international actors (Ogonegbu & Kagwain, 2025). Foreign debt emerges when domestic resources are inadequate to finance development projects or stabilize the economy, prompting governments to seek external assistance. This type of debt is a crucial part of international economic relations, as it links the borrowing country with global capital markets and institutions such as the International Monetary Fund, World Bank, and regional development banks. Foreign debt serves as a mechanism through which developing countries access financial resources needed to bridge budget deficits, undertake infrastructural projects, and enhance productive capacities (Okezie & Promise, 2025). It is usually governed by contractual terms involving repayment schedules, interest rates, and legal frameworks that often reflect international financial standards.

Foreign debt also implies an element of vulnerability, since it exposes the borrowing nation to exchange rate fluctuations and changes in global financial conditions. Because repayment must typically be made in foreign currency, the country must maintain adequate reserves or ensure strong export performance to meet these obligations. However, foreign debt is not only a burden but also an avenue for capital inflows that can accelerate economic growth if well managed (Ogonegbu & Kagwain, 2025). In essence, foreign debt represents the total outstanding obligations a government has to external lenders (Ogbonna et al., 2023). It shows the extent to which a country relies on international financial assistance to complement domestic resources. While it increases a state's liabilities, it also provides opportunities to finance critical projects, modernize infrastructure, and foster integration into the global economy.

2.1.1.3 Debt Service

Debt service refers to the regular payments a government or borrower makes to meet the obligations of outstanding loans (Nwoye et al., 2023). These payments usually cover both the interest charged on the borrowed funds and the repayment of the principal over time. In simple terms, debt service is the cost of borrowing money and the responsibility of meeting repayment schedules as agreed with lenders (Ogonegbu & Kagwain, 2025). It reflects the extent to which borrowed resources are tied to future repayment commitments. Expanding further, debt service can be understood as a recurring financial obligation that represents the burden of past borrowing decisions. When a government takes loans, either locally or from international institutions, the agreement comes with repayment conditions that spread over several years. Meeting these obligations is necessary to maintain trust with lenders and preserve the creditworthiness of the country. It also signals the ability of the borrower to manage financial responsibilities without default.

Debt service is not just a matter of financial accounting, but a determinant of how much freedom a government has to spend on developmental projects. A country with heavy debt service requirements may find itself allocating a large share of its revenue to repayment rather than to education, health, or infrastructure (Ikwo et al., 2024). In this way, debt service reflects the cost of dependence on borrowed funds and highlights the balance between short-term access to resources and long-term repayment burdens. In essence, debt service is the ongoing commitment that arises after borrowing, shaping the way resources are distributed and how fiscal stability is maintained (Afure & Ifeanyi, 2024). It represents the unavoidable price that accompanies the decision to rely on loans, whether domestic or foreign, and underscores the relationship between borrowing today and repayment tomorrow.

2.1.2 Economic Development

Economic development refers to the broad and sustained process through which a country improves the standard of living of its population (Afure & Ifeanyi, 2024). It is not limited to increases in income or production but includes the overall advancement of social, health, educational, and infrastructural conditions. Economic development is therefore a measure of how an economy evolves over time to ensure better quality of life, greater access to opportunities, and reduced levels of poverty (Davidescu et al., 2024). Unlike economic growth, which mainly refers to increases in output and income, economic development is a broader idea that looks at how well people benefit from such increases. It emphasizes improvements in living conditions, such as better housing, improved healthcare, job creation, and access to education. Development, in this sense, involves both quantitative and qualitative progress that shapes the overall welfare of society.

Economic development is often linked to long-term structural changes in the economy (Ogbonna et al., 2023). This includes industrialization, modernization of agriculture, expansion of services, and improvement in governance and

institutions. The goal is to create a system that not only generates wealth but also distributes it fairly, reducing inequality and ensuring inclusive growth. It is a dynamic process that evolves as societies move from lower levels of productivity and welfare to higher ones. Economic development can be described as the path through which a country moves from underdevelopment to improved human well-being (Ofurum & Fubara, 2022). It highlights the transformation of both the economy and the society in ways that allow citizens to live longer, healthier, and more meaningful lives. It represents the real progress of nations beyond the numbers of income and output, focusing on how resources are converted into actual improvements in people's daily lives.

2.1.2.1 Human Development Index (HDI)

The Human Development Index is a statistical measure used to assess the level of development in a country by considering both economic and social factors (Ulici, 2020). It was introduced by the United Nations Development Programme to provide a more comprehensive way of looking at progress beyond just income or production figures. HDI combines life expectancy, education, and income into a single measure that reflects how well a population is living. HDI captures the well-being of individuals in a simple index that ranges from very low to very high (Ferraz et al., 2020). Life expectancy is included to measure health, education is assessed through years of schooling, and income is considered to show access to resources. By combining these, HDI serves as a broader picture of development than relying on economic growth alone.

The Human Development Index is important because it recognizes that wealth alone does not tell the full story of people's lives (Ulici, 2020). A country can have high income levels but still struggle with poor health outcomes or low education rates. HDI therefore shifts attention to the ability of people to live long, knowledgeable, and decent lives. It reflects development as the expansion of human choices rather than just economic expansion (Shrotryia & Singh, 2020). HDI is a tool for comparing development across countries and over time. It shows whether progress in income translates into better lives for citizens or whether other areas are being neglected.

2.1.3 Nigerian Debt Profile

The trend in domestic debt from 1999 to 2023 (see Appendix A) shows steady accumulation that becomes pronounced from the 2010s. Domestic debt rose from ₦794.81 billion in 1999 to ₦1.02 trillion in 2001, and it climbed further to ₦4.55 trillion by 2010. Growth continued through the decade and by 2014 domestic debt reached ₦7.90 trillion. The pace of borrowing accelerated after 2015, with domestic debt at ₦8.84 trillion in 2015 and moving to ₦11.06 trillion in 2016. By 2020 it stood at ₦16.02 trillion, rose to ₦22.21 trillion in 2022, and then jumped sharply to ₦53.26 trillion in 2023, showing a very large one-year increase into 2023.

Foreign debt displays a more uneven path but also large increases in recent years. Foreign obligations stood at ₦2.58 trillion in 1999 and rose to ₦4.89 trillion by 2004, then fell markedly in the mid-2000s to below ₦1 trillion after relief and restructuring efforts. From the late 2000s the external debt level rose gradually and then accelerated in the 2010s. By 2019 foreign debt was ₦9.02 trillion, and it climbed to ₦12.71 trillion in 2020. The upward trend continued into the early 2020s with ₦15.86 trillion in 2021 and ₦18.70 trillion in 2022, peaking at ₦38.22 trillion in 2023.

Debt service costs grew from modest levels at the turn of the century to very large fiscal outlays by 2023. Annual debt service moved from ₦30.84 billion in 1999 to ₦394.00 billion in 2005, and after some fluctuations it reached ₦941.70 billion in 2014. From 2016 onward the burden rose sharply, passing into the trillions with ₦1.43 trillion in 2016 and ₦2.16 trillion in 2018. By 2020 debt service stood at ₦3.27 trillion, rose to ₦5.66 trillion in 2022, and reached ₦8.56 trillion in 2023, reflecting the growing cost of servicing both domestic and external borrowing.

2.2. Empirical Review

Amu et al. (2025) investigated the relationship between public debt and economic development in Nigeria. The study's objectives were to examine the impact of public debt on economic growth, aggregate demand, sectoral composition, and to determine whether there is a threshold level of debt that affects development. An ex-post facto research design was employed, and econometric analyses were conducted using the E-views statistical package. The results revealed significant threshold effects: external debt posed risks when it reached between 50–60 percent of GDP, while domestic debt thresholds were identified between 15–17 percent. Both external and domestic debts were found to negatively influence economic growth and development. The researchers recommended that Nigerian governments at all levels work to reduce long-term debt accumulation by broadening the tax base and strengthening fiscal operations. The study also identified debt dependence as a structural issue rooted in fiscal federalism and resource control disputes, suggesting that stronger fiscal discipline would enable more effective debt management.

Abimboye et al. (2025) examined the effects of public debt on national development in Nigeria from 1986 to 2022. The study adopted a quantitative approach, using ex-post facto design and Ordinary Least Squares (OLS) to analyze long-run relationships among variables. Data were sourced from the Central Bank of Nigeria, Debt Management Office, National Bureau of Statistics, International Monetary Fund, and the World Bank. Key variables included domestic debt, external debt, exchange rates, and the Human Development Index (HDI), which served as a proxy for national development. Findings showed that domestic debt had a positive and significant impact, with a 1% increase in domestic borrowing resulting in a 21% increase in HDI. In contrast, external debt reduced HDI by 16% for each 1% increase, while exchange rate fluctuations also negatively affected development. The study concluded that public debt significantly shapes national development and recommended a shift toward domestic borrowing, coupled with policies to reduce excessive external borrowing and manage exchange rate volatility, to ensure sustainable growth.

Ogonegbu and Kagwaini (2025) analyzed the influence of external debt on Nigeria's economic growth between 2010 and 2022. The study focused on rising debts from Eurobonds and bilateral loans, particularly those from China, which have significant implications for long-term fiscal stability. Using the debt overhang theory and an Auto-Regressive Distributed Lag (ARDL) model with quarterly data, the study examined how external debt relates to GDP growth, with exchange rate, inflation, and government capital expenditure as control variables. Results indicated that while external borrowing can spur growth by funding infrastructure and development, debt servicing obligations place heavy pressure on public finances, supporting the debt overhang theory. This dynamic risks crowding out public investment and constraining long-term growth. The study contributes empirical hints into the complex relationship between debt and economic growth, highlighting the need for balanced debt management strategies to sustain development.

Okezie and Promise (2025) investigated the effect of public debt—both domestic and external—on Nigeria's economic performance from 1981 to 2022. Using a Vector Error Correction Model (VECM) and causality analysis, the research examined short- and long-term debt-growth dynamics. Data obtained from the Central Bank of Nigeria and Debt Management Office were analyzed with descriptive and inferential methods, including stationarity and cointegration tests. The findings showed that external debt positively and significantly contributes to economic growth when directed toward productive sectors. Conversely, domestic debt had a negative and significant effect, likely due to crowding out private investment and exerting fiscal pressure. The study emphasized the importance of aligning borrowing with productive investments and maintaining sustainable debt levels, recommending efficient utilization of funds to promote long-term growth and stability.

Ikwuo et al. (2024) explored the effects of public debt on Nigeria's economic development between 2000 and 2023, with a focus on domestic debt, bilateral debt, multilateral debt, and debt servicing. An ex-post facto design was adopted, and secondary data were collected from the Debt Management Office, Central Bank of Nigeria, United Nations Development Programme, and National Bureau of Statistics. Multiple regression analysis, the Augmented Dickey-Fuller test, Johansen cointegration test, and Error Correction Model were employed. The results indicated that domestic debt had a negative but insignificant impact on development, bilateral debt showed a positive but insignificant effect, and multilateral debt had a negative but insignificant effect. Debt servicing, however, displayed a positive but insignificant relationship with development.

Afure and Ifeanyi (2024) examined the effect of public debt on Nigeria's economic development over the period 1981–2021. Data were sourced from the Central Bank of Nigeria and the World Bank. Two models were used: the first employed GDP per capita as the dependent variable, while the second used gross fixed capital formation. Domestic debt, external debt, and total debt service payments were the independent variables. The study applied the ARDL technique after confirming stationarity of the data. Findings showed that domestic debt exerted a positive and significant influence on GDP per capita both in the short and long run. External debt negatively and significantly affected GDP per capita in the short run, though the effect turned positive and insignificant in the long run. Debt servicing had a positive but insignificant effect in the short run and a negative, significant effect in the long run. Moreover, all components of public debt were found to have negative and insignificant effects on gross fixed capital formation during the study period.

Ogbonna et al. (2023) investigated how public debt influences Nigeria's economic development, focusing on domestic debt effects on the human development index and per capita income, as well as external debt effects on the same indicators. Anchored on the classical theory of public debt, the study used internal and external debts as independent variables and HDI and PCI as dependent variables. Secondary data were obtained from the Central Bank of Nigeria's statistical bulletin, and the Granger causality test was used for empirical analysis. Results indicated that both public debt and domestic debt had no significant effect on per capita income and HDI, respectively. The study

recommended that while public borrowing may be unavoidable for a developing country like Nigeria, future debts should be directed toward viable and productive projects capable of shifting the economy from a consumption-driven to a production-driven model. It further advised policymakers to closely monitor external economic fluctuations in countries on which Nigeria depends, to reduce vulnerability to adverse spillover effects.

Nwoye et al. (2023) assessed the impact of domestic debt, external debt, and debt servicing on Nigeria's GDP between 1999 and 2021. Using an ex-post facto research design with time-series data, the study applied ordinary least squares regression, unit root tests, and Johansen cointegration techniques. The results revealed that domestic debt significantly and positively influenced GDP ($\beta_1 = 2.784464$, $p\text{-value} = 0.000$), while external debt had a significant but negative effect ($\beta_2 = -1.340768$, $p\text{-value} = 0.000$). Debt servicing showed no significant effect on GDP ($\beta_3 = -0.062668$, $p\text{-value} = 0.1101$). The study concluded that rising debt servicing obligations create fiscal challenges for Nigeria, especially in a context of declining revenues due to mismanagement of resources, corruption, and leadership failures. These issues risk undermining the country's ability to meet debt obligations.

John (2023) explored the effect of external debt on Nigeria's economic development using annual data from 2006 to 2022. Given the mixed stationarity of the variables, the ARDL model was applied. The study found that external debt had a significant negative impact on economic development, measured through GDP and inflation rate, while showing a negative but insignificant effect on gross national income per capita. Similarly, external debt servicing had negative but insignificant effects on all indicators of economic development considered. The study concluded that rising external debt poses serious risks to Nigeria's development prospects. It recommended channeling borrowed funds into productive capital projects rather than unproductive or recurrent expenditures, in order to generate revenue and avoid debt overhang.

Ofurum and Fubara (2022) analyzed the relationship between public debt and Nigeria's economic development between 1980 and 2019. Data were obtained from the Central Bank of Nigeria's statistical bulletin. The study applied the Augmented Dickey-Fuller test, ARDL model, and Granger causality test. Results showed that foreign debt servicing exerted a negative but insignificant effect on real GDP. Likewise, external debt had no significant impact on unemployment, while debt servicing also showed no significant effect on unemployment.

2.3. Theoretical Framework

The Dual-Gap Theory was developed in the 1960s by economists Hollis B. Chenery and Alan M. Strout (Ojonugwa, 2024). It emerged as part of development economics literature that sought to explain the challenges faced by developing countries in achieving sustainable economic growth. The theory was first articulated in their 1966 work, where they argued that the growth of developing economies was often constrained by two major gaps: the savings gap and the foreign exchange gap. This approach shifted attention from the assumption that lack of capital alone hinders growth, to a broader understanding that external resources and trade imbalances also play a crucial role (Agyapong & Bedjabeng, 2020).

The main postulation of the Dual-Gap Theory is that economic development in less developed countries is limited by two major constraints (Ikwuo et al., 2024). The first is the savings gap, which occurs when domestic savings are insufficient to finance the level of investment needed to achieve targeted growth. The second is the foreign exchange gap, which arises when the foreign exchange available from exports is not enough to finance the import of capital goods and other essential inputs required for development. The theory holds that even if a country overcomes one of the gaps, the other can still hinder economic growth (Agyapong & Bedjabeng, 2020). For example, a nation may generate enough savings domestically but still fail to grow due to inadequate foreign exchange for importing technology and equipment.

The relevance of the Dual-Gap Theory to this study lies in its explanation of how countries like Nigeria rely on external borrowing to bridge the shortfall between savings, investment, and foreign exchange needs. The rapid increase in domestic and external debt, as well as the growing burden of debt servicing, reflects attempts to address these persistent gaps (Ikwuo et al., 2024). By applying this theory, the study provides a framework to understand why Nigeria's debt profile has expanded over the years and how this affects its fiscal sustainability. It also shows that without adequate domestic savings and export earnings, borrowing becomes inevitable, making the theory directly useful for analyzing the dynamics of Nigeria's debt trends.

2.4. Gap in Literature

A review of existing studies shows that much work has been done on the effect of public debt on economic development in Nigeria, yet an important gap remains unaddressed. For instance, Amu et al. (2025) focused on threshold levels of external and domestic debt, while Abimboye et al. (2025) examined how domestic and external debts affect the Human Development Index without considering the role of CPI. Similarly, Ogonegbu and Kagwaini (2025) emphasized external debt dynamics, exchange rate, and capital expenditure, and Okezie and Promise (2025) analyzed short- and long-run effects of debt using VECM, but both overlooked how price changes can influence debt–development relationships. Ikwuo et al. (2024) considered bilateral and multilateral debts along with debt servicing, and Afure and Ifeanyi (2024) used GDP per capita and capital formation as proxies, yet neither accounted for the distortions CPI may cause to human welfare. Ogbonna et al. (2023) investigated the link between public debt and HDI but excluded CPI pressures that directly affect living standards. Likewise, Nwoye et al. (2023) assessed debt components on GDP, John (2023) analyzed external debt and development indicators, and Ofurum and Fubara (2022) explored debt and unemployment, but all these works ignored the consumer price index. The gap, therefore, lies in the fact that although previous studies such as those by Amu et al. (2025), Abimboye et al. (2025), Ogonegbu and Kagwaini (2025), Okezie and Promise (2025), Ikwuo et al. (2024), Afure and Ifeanyi (2024), Ogbonna et al. (2023), Nwoye et al. (2023), John (2023), and Ofurum and Fubara (2022) provide useful hints, none of them controlled for CPI, which is critical because CPI affects household welfare, purchasing power, and ultimately the Human Development Index.

3. Research Method

3.1. Research Design

This study adopted an ex-post facto research design to examine the effect of public debt on the economic development of Nigeria. The design is appropriate because it makes use of already existing data, where the independent variables (domestic debt, foreign debt, and debt service) and their effect on the dependent variable (Human Development Index) are analyzed after the events have occurred (Muojekwu et al., 2025; Efenyumi & Nworie, 2025). The study also included the Consumer Price Index (CPI) as a control variable to account for the influence of price level changes on human development. Since the data relates to historical records that cannot be manipulated, the ex-post facto design was the most suitable for this study.

3.2. Source of Data

The study relied on secondary data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and the Debt Management Office (DMO) reports. Additional data on the Human Development Index was sourced from United Nations Development Programme (UNDP) reports, while Consumer Price Index data was obtained from the National Bureau of Statistics (NBS). The period covered is from 1999 to 2023, chosen because it represents the democratic era when Nigeria’s borrowing patterns significantly increased.

3.3. Model Specification

The study adopted the model by Ikwuo et al. (2024) whose model is re-presented below:

$$\text{HDI} = B_0 + B_1\text{DDEBT}_1 + B_2\text{BDEBT}_2 + B_3\text{MDEBT}_3 + B_4\text{DESERV}_4 + B_5\text{INF}_5 + U_{it} \quad (1)$$

where;

- HDI = Human Development Index
- DDEBT = Domestic debt
- BDEBT = Bilateral debt
- MDEBT = Multilateral debt
- DESERV = Debt servicing
- INF = Inflation
- B₀ = Intercept
- B₁, ..., B₅ = Coefficient of parameter estimate and;
- U_{it} = Gaussian white noise.

The model above was modified to suit the specific objectives of the study, hence the model below:

$$\text{HDI} = \alpha_0 + \alpha_1\text{DD} + \alpha_2\text{FD} + \alpha_3\text{DS} + \alpha_4\text{CPI} + \epsilon_t \tag{2}$$

where:

- HDI = Human Development Index
- DD = Domestic Debt
- FD = Foreign Debt
- DS = Debt Service
- CPI = Consumer Price Index (Control Variable)
- α_0 = Constant term
- $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ = Coefficients of the regression
- ϵ_t = Error term

3.4. Description of Model Variables

Table 1. Variable Measurement

Variables	Measurement	Source
Domestic Debt	Total annual domestic debt stock as a ratio of GDP	CBN Statistical Bulletin
Foreign Debt	Total annual external debt stock as a ratio of GDP	CBN Statistical Bulletin, DMO Reports
Debt Service	Total annual debt service payment as a ratio of GDP	CBN Statistical Bulletin, DMO Reports
Human Development Index	Composite index of life expectancy, education, and income	UNDP Reports
Consumer Price Index	Measure of changes in the general price level of goods and services in Nigeria	NBS Reports

3.5. Method of Data Analysis

The study began with descriptive statistics to summarize the dataset. To test the hypotheses, the study employed the Ordinary Least Squares (OLS) regression method because it is widely recognized for its efficiency in estimating the relationship between variables when the classical regression assumptions are satisfied. OLS provides unbiased and consistent parameter estimates, making it suitable for determining the extent to which domestic debt, foreign debt, and debt service affect the Human Development Index, while controlling for the Consumer Price Index. This method was chosen as it allows for straightforward interpretation of coefficients and significance levels, thereby showing both the direction and magnitude of the effect of each independent variable on economic development. In addition, the use of OLS facilitated hypothesis testing through the evaluation of p-values, which determined whether the independent variables exerted statistically significant effects on the dependent variable within the study period.

3.6. Decision Rule

The decision rule was that if the p-value was greater than 0.05, the null hypothesis of no significant effect was accepted. If the p-value was less than 0.05, the alternative hypothesis of a significant effect was accepted.

4. Results and Discussions

4.1. Descriptive Analysis

The data collected for the study are presented in Appendix A of this report. Table 2 shows the descriptive analysis of the data.

The Human Development Index (HDI) in Table 2 has a mean value of 0.491480, indicating that Nigeria’s average human development performance during the study period is just below 0.5, which falls within the “medium human development” category as defined by UNDP. The maximum HDI recorded was 0.548000, while the minimum was 0.430000, showing some variation but not wide fluctuations in human development outcomes across the years studied. The standard deviation of 0.035647 reflects relatively low dispersion around the mean, implying that Nigeria’s HDI remained fairly stable without drastic shifts. The skewness value of 0.135469 suggests the distribution

is slightly positively skewed, meaning most HDI values are close to the mean, with few years having higher values. Kurtosis of 1.707940 indicates a flatter distribution (platykurtic) compared to the normal curve. Finally, the Jarque-Bera probability of 0.403442 is above the 5% significance level, which implies the HDI data is normally distributed, making it suitable for regression analysis.

Domestic Debt (DD), measured as the ratio of total domestic debt stock to GDP, shows a mean of 0.131904 in Table 2, meaning domestic debt averages about 13.2% of GDP. The maximum ratio was 0.683355, which indicates that in some years, domestic borrowing was extremely high relative to GDP, while the minimum of 0.032822 shows years with very low reliance on domestic debt. The standard deviation of 0.138661 suggests a wide spread, reflecting high volatility in Nigeria’s domestic debt profile. The skewness of 2.672076 indicates a strong positive skew, meaning that most observations are clustered at lower debt levels, with a few extreme years of very high borrowing. Kurtosis of 11.07982 points to a highly peaked distribution (leptokurtic), further confirming extreme values. The Jarque-Bera probability of 0.000000 rejects normality, showing that the domestic debt series is not normally distributed, likely due to sharp spikes in borrowing in certain periods.

Table 2. Descriptive Analysis

	HDI	DD	FD	DS	CPI
Mean	0.491480	0.131904	0.099237	0.021750	182.9484
Median	0.480000	0.096645	0.083628	0.010901	122.3400
Maximum	0.548000	0.683355	0.490400	0.109794	677.4000
Minimum	0.430000	0.032822	0.010012	0.001274	26.99000
Std. Dev.	0.035647	0.138661	0.106693	0.025853	166.1180
Skewness	0.135469	2.672076	2.087797	2.098695	1.469355
Kurtosis	1.707940	11.07982	8.258026	6.932187	4.570412
Jarque-Bera	1.815445	97.75367	46.96085	34.45852	11.56481
Probability	0.403442	0.000000	0.000000	0.000000	0.003081
Sum	12.28700	3.297608	2.480930	0.543751	4573.710
Sum Sq. Dev.	0.030496	0.461448	0.273203	0.016041	662284.8
Observations	25	25	25	25	25

Foreign Debt (FD), expressed as the ratio of external debt to GDP, has a mean of 0.099237, meaning on average foreign debt accounted for about 9.9% of GDP in the period studied (Table 2). The maximum value of 0.490400 highlights years of heavy dependence on external borrowing, while the minimum of 0.010012 reflects times of very low foreign debt relative to GDP. The standard deviation of 0.106693 shows considerable variability in foreign borrowing patterns. The skewness of 2.087797 suggests strong positive skewness, meaning most years recorded relatively low external debt, with a few years witnessing unusually high levels. The kurtosis of 8.258026 indicates a leptokurtic distribution, suggesting sharp peaks with heavy tails. The Jarque-Bera probability of 0.000000 shows that the foreign debt series significantly deviates from normal distribution, likely due to shocks and abrupt changes in borrowing levels caused by debt reliefs, restructurings, or policy changes.

Debt Service (DS), measured as the ratio of annual debt service payments to GDP, has a mean of 0.021750 according to Table 2, meaning that on average, Nigeria spent about 2.2% of GDP on debt servicing. The maximum of 0.109794 reveals that in some years, debt servicing obligations took up over 10% of GDP, while the minimum of 0.001274 indicates years of very minimal servicing costs. The standard deviation of 0.025853 demonstrates noticeable variability in debt servicing burdens. A skewness of 2.098695 implies strong positive skewness, with most years characterized by relatively low debt service costs, but a few years showing sharp increases. Kurtosis of 6.932187 suggests the series is leptokurtic, reflecting the existence of extreme outliers. The Jarque-Bera probability of 0.000000 indicates the debt service variable is not normally distributed, which can be attributed to periods of sharp debt servicing spikes, possibly linked to external shocks or rising domestic interest payments.

The Consumer Price Index (CPI), used as a control variable in Table 2, has a mean of 182.9484, showing that the general price level in Nigeria averaged around 183 points during the study period. The maximum CPI recorded was 677.4000, while the minimum was 26.99000, indicating significant inflationary growth over time. The standard deviation of 166.1180 shows very high variability, reflecting Nigeria’s history of inflation volatility. Skewness of 1.469355 suggests the CPI distribution is positively skewed, meaning price levels were generally clustered at lower values with some years experiencing sharp inflation surges. Kurtosis of 4.570412 indicates a leptokurtic distribution, showing that the data is more peaked than normal and influenced by extreme price hikes. The Jarque-Bera probability

of 0.003081, being less than 5%, means the CPI series is not normally distributed, which is expected given Nigeria’s irregular inflation patterns influenced by oil price shocks, exchange rate volatility, and fiscal imbalances.

4.2. Test of Hypotheses

Table 3. Test of Hypotheses

Dependent Variable: HDI
 Method: Least Squares
 Date: 08/23/25 Time: 11:46
 Sample: 1999 2023
 Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DD	-0.019818	0.067608	-0.293125	0.7724
FD	0.203998	0.094170	2.166273	0.0425
DS	-4.678274	1.127361	-4.149758	0.0005
CPI	0.000808	0.000136	5.935894	0.0000
C	0.427852	0.008518	50.22719	0.0000
R-squared	0.896955	Mean dependent var		0.491480
Adjusted R-squared	0.876346	S.D. dependent var		0.035647
S.E. of regression	0.012535	Akaike info criterion		-5.743743
Sum squared resid	0.003142	Schwarz criterion		-5.499968
Log likelihood	76.79679	Hannan-Quinn criter.		-5.676130
F-statistic	43.52264	Durbin-Watson stat		2.006625
Prob(F-statistic)	0.000000			

Source: Analysis Output from Eviews (2025)

From Table 3, the model recorded an R-squared value of 0.896955, which means that about 89.7% of the variations in the Human Development Index (HDI) in Nigeria during 1999–2023 are explained by domestic debt, foreign debt, debt service, and consumer price index. This indicates that the explanatory variables strongly account for changes in economic development as captured by HDI. The probability of the F-statistic is 0.000000, which is less than the 5% significance level. This confirms that the overall model is statistically valid and that the set of independent variables jointly have a significant effect on HDI. Furthermore, the Durbin-Watson statistic of 2.006625 is approximately equal to 2, indicating that there is no

The constant term has a coefficient of 0.427852 with a p-value of 0.0000, which is significant at the 5% level. This implies that when domestic debt, foreign debt, debt service, and CPI are held at zero, Nigeria’s baseline HDI is about 0.428. This baseline effect highlights that other non-included factors such as governance, institutional quality, and global economic conditions may also sustain a minimum level of human development even in the absence of debt or inflationary influence.

The consumer price index, used as a control variable, has a coefficient of 0.000808 with a p-value of 0.0000. The coefficient means that for every unit increase in CPI, HDI increases by 0.000808 units. This suggests that mild inflation may reflect rising economic activities and growth that positively affect human development in the long run. However, the effect is very small in magnitude, indicating that although CPI significantly affects HDI, its contribution is more incremental than substantial. Since the p-value is highly significant, CPI is an important control variable in explaining variations in HDI in Nigeria.

4.2.1. Test of Hypothesis I

H01) Domestic debt has no significant effect on human development index of Nigeria.

Domestic debt has a coefficient of -0.019818 with a p-value of 0.7724. The coefficient means that for every one-unit increase in domestic debt as a ratio of GDP, HDI decreases by about 0.0198 units. This marginal effect suggests that

higher domestic borrowing slightly reduces human development by constraining resources available for social spending. However, since the p-value is greater than 0.05, the effect is not statistically significant. Thus, although domestic debt appears to have a negative effect on HDI, the effect is weak and cannot be relied upon for conclusive policy implications within the study period. In terms of hypothesis testing, since the effect is not significant, the null hypothesis (H01) that domestic debt has no significant effect on HDI is accepted.

4.2.2. Test of Hypothesis II

H02) Foreign debt has no significant effect on human development index of Nigeria.

Foreign debt has a coefficient of 0.203998 with a p-value of 0.0425. The coefficient indicates that a one-unit increase in foreign debt as a ratio of GDP increases HDI by about 0.204 units. This marginal effect suggests that foreign borrowing enhances human development, possibly because external loans often come with longer repayment terms and may be tied to infrastructure, education, or healthcare projects that directly improve human welfare. Since the p-value is less than 0.05, the effect is statistically significant. Thus, foreign debt exerts a positive and significant effect on HDI during the study period. Consequently, the alternate hypothesis that foreign debt has a significant and positive effect on HDI is accepted.

4.2.3. Test of Hypothesis III

H03) Debt service has no significant effect on human development index of Nigeria.

Debt service carries a coefficient of -4.678274 with a p-value of 0.0005. The coefficient shows that a one-unit increase in debt servicing (as a ratio of GDP) reduces HDI by about 4.678 units. This marginal effect is very large, reflecting the heavy burden debt repayment places on Nigeria's economy. Higher debt servicing crowds out resources that could have been allocated to health, education, and welfare programs, thereby undermining human development. The p-value of 0.0005 confirms the effect is significant at the 5% level. This means debt service has a negative and significant effect on HDI, reinforcing the debt overhang problem. Therefore, the alternate hypothesis that debt service has a significant and negative effect on HDI is accepted.

4.3. Discussion of Results

The finding that domestic debt exerts a negative but non-significant effect on Nigeria's human development index ($\beta = -0.019818$, $p = 0.7724$) suggests that while borrowing domestically might impose fiscal pressures that crowd out private sector investment and reduce resources available for human capital development, its effect is not strong enough to meaningfully alter HDI outcomes. This aligns with Ikwuo et al. (2024), who also reported a negative but insignificant effect of domestic debt on development, as well as Ogbonna et al. (2023), who found that domestic debt did not significantly affect HDI. These results point to the possibility that domestic borrowing in Nigeria is often channeled into recurrent expenditure rather than investments in education, healthcare, or infrastructure, which would directly improve human development. However, the finding contrasts with Abimboye et al. (2025) and Nwoye et al. (2023), both of whom reported significant positive effects of domestic debt on development, highlighting how the effect may vary depending on the scale of borrowing and fiscal discipline in its utilization. Similarly, Amu et al. (2025) found domestic debt to negatively affect development, although their evidence pointed to clear threshold levels beyond which the negative effects became significant. Thus, the non-significant outcome in this study underscores the weak transmission channel from domestic borrowing to welfare-enhancing investments.

The result showing that foreign debt has a positive and significant effect on Nigeria's HDI ($\beta = 0.203998$, $p = 0.0425$) implies that external borrowing, when effectively deployed, contributes to enhancing education, healthcare, and income levels. This finding is consistent with Okezie and Promise (2025), who reported that external debt significantly boosts economic growth when directed toward productive sectors, and resonates with Ogonegbu and Kagwaini (2025), who argued that foreign loans can stimulate growth through infrastructure development. The positive significance also partly agrees with Afure and Ifeanyi (2024), who observed that in the long run, external debt turned positive (though insignificant) in influencing GDP per capita, suggesting that its benefits may be realized over time. However, this result contrasts with Abimboye et al. (2025), who found foreign debt to significantly reduce HDI, as well as John (2023), who reported a significant negative impact of external debt on GDP and development. Likewise, Amu et al. (2025) highlighted the dangers of external debt once it crosses certain thresholds, suggesting that Nigeria's recent experience may fall below such limits, allowing external borrowing to contribute positively to

development. Thus, the significant positive effect observed here highlights the potential developmental benefits of foreign debt when managed prudently and invested in welfare-enhancing sectors.

The evidence that debt service exerts a negative and significant effect on HDI ($\beta = -4.678274$, $p = 0.0005$) underscores the heavy fiscal burden imposed by rising repayment obligations, which divert resources away from investments in human capital and welfare. This aligns with Afure and Ifeanyi (2024), who found that debt service had a significant negative effect on economic development in the long run, highlighting how persistent repayments constrain developmental spending. Similarly, Ogonegbu and Kagwaini (2025) argued that debt servicing pressures crowd out public investment and weaken fiscal stability, supporting the debt overhang theory. John (2023) also found that external debt servicing had negative though mostly insignificant effects on development indicators, emphasizing its adverse implications for welfare. This outcome further resonates with Amu et al. (2025), who noted that debt dependence creates structural fiscal vulnerabilities that reduce the effectiveness of public investment. In contrast, Ikwuo et al. (2024) reported a positive but insignificant relationship between debt servicing and development, suggesting that the effect may vary across time horizons or depending on whether the borrowed funds are growth-inducing. Similarly, Ofurum and Fubara (2022) found debt servicing to have no significant effect on GDP or unemployment. Nevertheless, the significant negative effect in this study demonstrates that the fiscal pressures of servicing external and domestic debt obligations in Nigeria come at a tangible cost to human development, underscoring the trade-off between debt sustainability and welfare outcomes.

5. Conclusion

The findings of this study carry important implications for understanding the dynamics of public debt and its effect on the economic development of Nigeria. The evidence demonstrates that the structure and management of debt matter more than the sheer volume of borrowing, as the results show divergent outcomes between different components of public debt. The insignificance of domestic debt suggests that internal borrowing, though often relied upon to bridge budgetary shortfalls, does not necessarily translate into measurable improvements in human development, possibly because such resources are absorbed by recurrent expenditure or short-term fiscal pressures rather than long-term developmental projects. On the other hand, the positive effect of foreign debt indicates that external borrowing, when effectively structured, has the potential to support development outcomes, reflecting the possibility that these funds are tied to infrastructure, education, and health investments that directly contribute to the human development index. However, the large and significant negative effect of debt service highlights the unsustainable burden of repayment obligations, which diverts critical resources away from development-enhancing expenditures. This crowding-out effect implies that regardless of the developmental potential of borrowed funds, the continuous outflow of financial resources in the form of debt servicing erodes gains by limiting the government's fiscal space to sustain improvements in living standards. Taken together, these findings highlight the complex interplay between borrowing, repayment, and development outcomes, showing that debt can act both as a catalyst and as a constraint to economic development depending on how it is managed. Importantly, the results underscore that while foreign borrowing may provide some developmental benefits, the overall debt environment can hinder progress if debt servicing costs outweigh the benefits of borrowing. This reflects a structural challenge in Nigeria's fiscal framework, where the use of debt as a financing tool intersects with the sustainability of human development outcomes.

5.1. Recommendations

- a. To the Debt Management Office (DMO) of Nigeria: Since domestic debt has a negative but non-significant effect on the human development index, the DMO should ensure that domestic borrowing is strategically directed toward capital-intensive and development-oriented projects, rather than being overly utilized for recurrent expenditure, so that its contribution to human development becomes more impactful.
- b. To the Federal Ministry of Finance: Given that foreign debt shows a positive and significant effect on human development, the Ministry should continue to negotiate and secure external loans that are concessional in nature and tied to sectors such as education, healthcare, and infrastructure, ensuring that the funds borrowed directly translate into measurable improvements in Nigeria's human development outcomes.
- c. To the National Assembly: In light of the negative and significant effect of debt service on the human development index, lawmakers should prioritize enacting fiscal policies and frameworks that reduce the debt servicing burden by tightening borrowing limits and scrutinizing loan approvals, thereby preventing the diversion of scarce national resources from development-driven programs to excessive debt repayment obligations.

5.2. Suggestion for Further Studies

Future studies should consider extending the analysis to include other developing countries in Africa so that comparisons can be made and general conclusions drawn. Researchers could also include additional variables such as unemployment, poverty levels, or government capital expenditure to capture a fuller picture of how debt influences development. A longer time frame may also provide a deeper understanding of how borrowing patterns affect growth in the long run. Moreover, future work could make use of primary data such as surveys and interviews with policymakers and experts to complement secondary data and give richer explanations. This would strengthen the understanding of the role of debt in shaping human development.

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Appendix A Data Presentation

Years	Domestic Debt ₦'B	Foreign Debt ₦'B	Debt Service ₦'B	GDP ₦'B	DD	FD	DS	HDI	CPI
1999	794.81	2577.37	30.84	24215.78	.03	.11	.00	.46	26.99
2000	898.25	3097.38	131.05	25430.42	.04	.12	.01	.44	31.81
2001	1016.97	3176.29	155.42	26935.32	.04	.12	.01	.46	37.15
2002	1166.00	3932.88	163.81	31064.27	.04	.13	.01	.47	41.16
2003	1329.68	4478.33	363.51	33346.62	.04	.13	.01	.46	51.13
2004	1370.33	4890.27	382.50	36431.37	.04	.13	.01	.46	57.14
2005	1525.91	2695.07	394.00	38777.01	.04	.07	.01	.43	67.66
2006	1753.26	451.46	249.30	41126.68	.04	.01	.01	.47	74.65
2007	2169.64	438.89	213.73	43837.39	.05	.01	.00	.48	83.30
2008	2320.31	523.25	381.20	46802.76	.05	.01	.01	.48	92.77
2009	3228.03	590.44	251.79	50564.26	.06	.01	.00	.48	101.40
2010	4551.82	689.84	415.66	55469.35	.08	.01	.01	.48	112.25
2011	5622.84	896.85	527.18	58180.35	.10	.02	.01	.46	122.34
2012	6537.54	1026.90	679.30	60670.05	.11	.02	.01	.50	140.03
2013	7118.98	1387.33	828.10	63942.85	.11	.02	.01	.47	151.40
2014	7904.03	1631.50	941.70	67977.46	.12	.02	.01	.50	163.43
2015	8837.00	2111.51	1060.38	69780.69	.13	.03	.02	.52	179.22
2016	11058.20	3478.92	1426.00	68652.43	.16	.05	.02	.52	215.28
2017	12589.49	5787.51	1823.89	69205.69	.18	.08	.03	.53	249.26
2018	12774.41	7759.23	2161.37	70536.35	.18	.11	.03	.53	278.50
2019	14272.64	9022.42	2453.22	72094.09	.20	.13	.03	.54	313.64
2020	16023.89	12705.62	3265.13	70800.54	.23	.18	.05	.54	364.85
2021	19242.56	15855.23	4221.65	73382.77	.26	.22	.06	.54	423.83
2022	22210.36	18702.25	5656.58	74752.42	.30	.25	.08	.53	517.12
2023	53258.01	38219.85	8556.93	77936.10	.68	.49	.11	.55	677.40

Source: CBN Statistical Bulletin (2023) and UN HDI Report (1999-2023)