

**THE POLITICS OF DEBT-FINANCED DEVELOPMENT AND  
HUMAN CAPITAL FORMATION IN NIGERIA: A  
COMPARATIVE STUDY OF AFRICAN PUBLIC  
ADMINISTRATION SYSTEMS (BOTSWANA AND RWANDA)**

**Temple C. Nwambuko<sup>1\*</sup>, Ogonnaya N. Udoh<sup>2</sup> & Livingstone Inegite<sup>3</sup>**

<sup>1</sup>Department of Public Administration, Federal University Otuoke, Bayelsa State, Nigeria

<sup>2</sup>Department of Political Science, Abia State University, Uturu, Abia State, Nigeria

<sup>3</sup>Department of Political Science, Federal University Otuoke, Bayelsa State, Nigeria

\*nwambukotc@fuotuoche.edu.ng

**ABSTRACT:** This study examines the politics of debt-financed development and human capital formation in Nigeria, with a comparative perspective on Botswana and Rwanda. Against the backdrop of Nigeria's rising public debt and persistent deficits in education and healthcare investment, the research investigates how political and institutional dynamics influence the allocation, management, and effectiveness of debt-financed projects. Using a mixed-methods approach, qualitative data were collected through semi-structured interviews with policymakers and document reviews, while quantitative data were obtained from national budgetary records, the World Bank, and IMF databases covering 2015–2025. The qualitative data were analyzed thematically to identify recurring patterns in political prioritization, institutional capacity, and governance structures. Quantitative analysis employed descriptive statistics, correlation analysis, and regression models to examine the relationship between public debt levels and sectoral investments. Findings reveal that in Nigeria, political visibility and weak institutional coordination limit the effectiveness of debt in promoting human capital, with only 18–20% of debt-funded projects targeting education and healthcare. Correlation and regression analyses indicate weak associations and low predictive power between debt and human capital outcomes in Nigeria, in contrast to Botswana and Rwanda, where robust governance frameworks and strategic project prioritization yield strong positive impacts. The study concludes that debt alone is insufficient to enhance human capital; effective institutional capacity, transparent governance, and policy discipline are critical. Policy recommendations include prioritizing human capital in debt allocation, strengthening institutional coordination, improving transparency and accountability, and adopting lessons from high-performing African counterparts.

**Keywords:** Debt-Financed Development, Human Capital Formation, Public Administration, Nigeria, Botswana, Rwanda, Institutional Capacity, Governance.

## **INTRODUCTION**

The growing reliance on public borrowing as a strategy for financing development has become a defining feature of governance across many African states, particularly in Nigeria. Over the past two decades, Nigeria's escalating public debt profile has generated intense scholarly and policy debates regarding the developmental effectiveness of debt-financed investments, especially in

relation to human capital formation. While public borrowing is often justified as a mechanism to bridge fiscal deficits and fund infrastructure, the political dynamics shaping debt allocation, implementation, and accountability raise critical questions about whether such borrowing translates into sustainable improvements in education, health, and workforce capacity. Consequently, examining the politics of debt-financed development within the broader framework of African public administration systems provides a valuable lens for understanding the interplay between fiscal governance, institutional capacity, and developmental outcomes.

Theoretically, debt-financed development is anchored in Keynesian economic logic, which posits that strategic borrowing can stimulate growth and enhance productive capacity when invested in critical sectors such as education and health (Keynes, 1936). However, in many developing countries, political considerations often influence borrowing decisions, leading to misallocation of funds, elite capture, and weak institutional oversight (Mosley, 1987; Alesina & Tabellini, 1990; Nwambuko et al, 2024). In Nigeria, public debt has increased significantly, yet indicators of human capital development, such as educational quality, healthcare access, and labour productivity, have not improved commensurately (World Bank, 2023). This divergence suggests that the effectiveness of debt-financed development is mediated by governance structures, administrative traditions, and political incentives within public administration systems.

Comparatively, African public administration systems display varying levels of bureaucratic autonomy, fiscal discipline, and policy continuity, which influence the translation of borrowed funds into human capital outcomes. Countries such as Botswana and Rwanda, for example, have demonstrated relatively stronger institutional coordination and accountability mechanisms, enabling more efficient utilization of external and domestic borrowing for social sector development (Hope, 2014; Andrews et al., 2017). In contrast, Nigeria's federal structure, intergovernmental fiscal complexities, politicisation of budgetary processes, and Organizational politics, which promote informal, self-serving behaviours and power dynamics, often undermine policy coherence and limit the developmental impact of debt-financed initiatives (Olowu & Wunsch, 2004; Nwambuko et al, 2026). These comparative differences underscore the need to situate Nigeria's experience within a broader African administrative context to identify institutional patterns and governance practices that shape development outcomes.

Furthermore, the politics of debt-financed development intersects with issues of intergenerational equity, fiscal sustainability, and state legitimacy. Excessive borrowing without corresponding investments in human capital may constrain future public expenditure and exacerbate socio-economic inequalities (IMF, 2022). Conversely, well-managed borrowing directed toward education and health can enhance productivity, reduce poverty, and strengthen state capacity. Therefore, understanding how political institutions, administrative systems, and governance practices influence the allocation and management of debt is essential for evaluating its role in human capital formation.

This study, therefore, examines the politics of debt-financed development and human capital formation in Nigeria through a comparative analysis of African public administration systems. By exploring institutional arrangements, policy processes, and governance dynamics across selected African countries, the research aims to provide insights into how administrative capacity and

political incentives shape the developmental effectiveness of public borrowing. Ultimately, the study contributes to debates on fiscal governance, comparative public administration, and sustainable development in Africa, while offering policy-relevant recommendations for aligning debt strategies with long-term human capital development goals.

### **Problem Statement**

Despite the growing adoption of debt-financed development strategies in Nigeria, there remains a persistent disconnect between rising public debt levels and measurable improvements in human capital formation. Over the last two decades, Nigeria's public debt stock has expanded considerably, driven by both domestic and external borrowing aimed at financing infrastructure, social services, and economic recovery programmes. However, key indicators of human capital development, such as literacy rates, access to quality healthcare, educational attainment, and labour productivity, have not improved proportionately with the scale of borrowing (World Bank, 2023; UNDP, 2022). This discrepancy raises critical concerns regarding the political and administrative processes governing debt utilization and the extent to which borrowed funds are effectively channelled into sectors that enhance human capital development.

A central problem lies in the politicization of public borrowing decisions within Nigeria's public administration system. Borrowing is often influenced by short-term political incentives, electoral considerations, and intergovernmental bargaining rather than long-term developmental planning (Alesina & Tabellini, 1990; Ezeabasili et al., 2019). Consequently, debt-financed projects may prioritize visible infrastructure with immediate political returns over investments in education, health, and skills development, which yield long-term benefits but limited short-term political gains. This political economy dynamic undermines the transformative potential of debt-financed development and contributes to inefficient resource allocation.

Furthermore, institutional weaknesses within Nigeria's public administration system complicate the effective management of borrowed funds. Challenges such as bureaucratic fragmentation, weak monitoring and evaluation mechanisms, corruption, defective capital structures, excessive bureaucratic control or intervention, inappropriate technology, gross incompetence, and policy discontinuity have been identified as major obstacles to translating fiscal resources into sustainable human capital outcomes (Olowu & Wunsch, 2004; Hope, 2014; Nwambuko & Nnaeto, 2023). These structural deficiencies are particularly significant in a federal system like Nigeria's, where overlapping responsibilities among federal, state, and local governments create coordination problems and dilute accountability for debt-funded initiatives. As a result, even when borrowing is intended to support human capital formation, implementation gaps reduce the developmental impact.

Another dimension of the problem is the lack of comparative institutional learning within African public administration systems. While some African countries have successfully utilized debt financing to improve human capital indicators, Nigeria has struggled to achieve similar outcomes. For instance, variations in administrative capacity, fiscal discipline, and governance accountability and transparency across African states influence how effectively debt is converted into developmental gains (Andrews et al., 2017; Nwambuko et al., 2026). However, limited comparative

research examining Nigeria alongside other African public administration systems has constrained understanding of the institutional factors that shape successful debt-financed human capital development. Without such comparative insights, policy reforms risk being contextually weak and insufficiently grounded in best practices.

Additionally, the sustainability of Nigeria's debt trajectory poses a long-term threat to human capital investment. Rising debt servicing obligations increasingly consume a substantial proportion of government revenue, thereby reducing fiscal space for social sector spending (IMF, 2022). When debt servicing crowds out expenditure on education and healthcare, the very objective of borrowing for development becomes undermined. This creates a paradox where borrowing intended to promote development may inadvertently constrain future investments in human capital formation.

Given these challenges, there is a clear need to systematically examine how political incentives, administrative structures, and governance practices shape the relationship between debt-financed development and human capital formation in Nigeria. Moreover, situating Nigeria's experience within a comparative analysis of African public administration systems is essential for identifying institutional models and policy frameworks that enhance the developmental effectiveness of public borrowing. This study, therefore, seeks to address the gap by investigating the politics of debt-financed development and its implications for human capital formation in Nigeria, while drawing comparative lessons from selected African administrative systems. Through this approach, the research aims to provide empirical and theoretical insights that can inform policy reforms for aligning debt strategies with sustainable human capital development.

Therefore, the general objective of this study is to examine the politics of debt-financed development and its implications for human capital formation in Nigeria within a comparative framework of African public administration systems. The specific objectives include: to analyse how political incentives and institutional arrangements shape debt-financed development and human capital formation in Nigeria; to compare Nigeria's public administration system with selected African countries in terms of debt management and human capital outcomes; and to evaluate the relationship between public debt accumulation and government investment in education and healthcare in Nigeria. Additionally, the study is guided by the following research questions: How do political and institutional dynamics influence debt-financed development and human capital formation in Nigeria? To what extent do public administration systems in selected African countries affect the utilization of debt for human capital development compared to Nigeria? And what is the relationship between Nigeria's rising public debt and investment in key human capital sectors such as education and healthcare? Testable null hypotheses for the study include: political and institutional dynamics have no significant influence on debt-financed development and human capital formation in Nigeria; there is no significant difference between Nigeria and selected African countries in the effectiveness of public administration systems in utilizing debt for human capital development; and Nigeria's public debt level has no significant relationship with government investment in education and healthcare.

## LITERATURE REVIEW

### Conceptual Explorations

#### *Politics of Debt-Financed Development*

The concept of debt-financed development refers to the strategic use of public borrowing to fund infrastructure, social services, and economic transformation initiatives aimed at promoting long-term growth. Classical economic thought, particularly Keynesian theory, supports the idea that government borrowing can stimulate development when fiscal resources are insufficient to meet investment demands (Keynes, 1936). However, beyond its economic rationale, debt-financed development is deeply embedded in political processes that shape borrowing decisions, allocation priorities, and implementation outcomes. The politics of debt-financed development, therefore, emphasises how political incentives, institutional arrangements, and governance structures influence the effectiveness of borrowed funds in achieving developmental objectives.

Scholars argue that political leaders often utilize borrowing as a tool for consolidating power, funding politically visible projects, and addressing short-term electoral considerations rather than long-term human capital investments (Alesina & Tabellini, 1990). This political economy perspective highlights the tendency of governments to prioritize projects with immediate political benefits, such as large-scale infrastructure, over investments in education and healthcare, which yield benefits over longer time horizons (Persson & Svensson, 1989). In developing countries, weak institutional oversight and limited fiscal transparency further exacerbate the risk of inefficient debt utilization, resulting in rising debt burdens without corresponding developmental outcomes (Mosley, 1987). Consequently, the politics of debt-financed development focuses on the interplay between fiscal governance, political accountability, and institutional capacity in determining whether borrowing translates into sustainable development.

#### *Human Capital Formation*

Human capital formation refers to the process of developing the knowledge, skills, health, and competencies of individuals to enhance productivity and socio-economic development. The concept gained prominence through the works of Becker (1964) and Schultz (1961), who emphasized education and health as key investments that increase individual productivity and national economic growth. Human capital development is widely recognized as a critical determinant of sustainable development, particularly in developing economies where labour productivity and innovation are essential for economic transformation.

In the context of public finance, government investment in education, healthcare, and skills acquisition is central to human capital formation. However, the effectiveness of such investments depends on adequate funding, policy continuity, and institutional efficiency (Todaro & Smith, 2020). When governments rely on debt financing, the allocation of borrowed resources to human capital sectors becomes crucial for long-term development. Studies indicate that countries that channel borrowed funds into education and health tend to experience improved economic growth and social welfare outcomes (Barro, 1991). Conversely, when borrowing is directed toward non-

productive expenditures, the opportunity to strengthen human capital formation is diminished. Therefore, human capital formation serves as a key metric for evaluating the developmental impact of debt-financed policies.

### *African Public Administration Systems*

African public administration systems refer to the institutional frameworks, governance structures, and bureaucratic processes through which public policies are formulated and implemented across African states. These systems are shaped by colonial administrative legacies, post-independence reforms, and contemporary governance challenges, including decentralization, capacity constraints, and political interference (Olowu & Wunsch, 2004). The effectiveness of public administration systems significantly influences the translation of fiscal resources, including borrowed funds, into development outcomes.

Comparative public administration literature highlights variations across African countries in terms of bureaucratic professionalism, accountability mechanisms, and policy coordination (Hope, 2014). Some states have implemented reforms aimed at strengthening fiscal discipline, performance management, and service delivery, thereby improving the utilization of public resources. Others continue to face challenges such as corruption, weak monitoring systems, and fragmented institutional responsibilities, which undermine development efforts (Andrews et al., 2017). These differences are particularly relevant in understanding how debt-financed development policies are implemented and how effectively they contribute to human capital formation.

Furthermore, the relationship between public administration systems and development outcomes underscores the importance of institutional capacity in managing public debt. Strong administrative systems enhance transparency, ensure proper project selection, and facilitate monitoring of debt-funded initiatives. Conversely, weak administrative structures often result in policy discontinuity, inefficiency, and poor developmental outcomes. Thus, examining African public administration systems within a comparative framework provides insights into the governance factors that shape the politics of debt-financed development and its impact on human capital formation.

### **Political and Institutional Dynamics Influence in Debt-Financed Development and Human Capital Formation in Nigeria**

Political and institutional dynamics play a critical role in shaping the effectiveness of debt-financed development and its contribution to human capital formation in Nigeria. While public borrowing is often justified as a mechanism for bridging fiscal deficits and financing development projects, the outcomes of such borrowing largely depend on governance structures, policy priorities, and institutional capacity. In Nigeria, the political economy of borrowing is influenced by electoral considerations, intergovernmental fiscal relations, and administrative constraints, all of which affect how debt resources are allocated and implemented. Consequently, the link between rising public debt and improvements in education, healthcare, and workforce development remains contested in the literature.

Scholars argue that political incentives significantly influence borrowing decisions and expenditure priorities. Political leaders may favour debt-financed projects that yield immediate visibility and electoral gains, such as large-scale infrastructure, rather than long-term investments in human capital sectors (Alesina & Tabellini, 1990). This tendency is particularly pronounced in developing democracies where accountability mechanisms are weak and political competition encourages short-term policy horizons (Persson & Svensson, 1989). In Nigeria, such dynamics have contributed to a mismatch between borrowing levels and social sector investment, as public debt has increased without proportional improvements in educational quality or healthcare outcomes (World Bank, 2023). This suggests that the politics of public borrowing shapes not only the volume of debt but also its developmental effectiveness.

Institutional capacity further mediates the relationship between debt-financed development and human capital formation. Effective institutions enhance policy coordination, ensure transparent budget implementation, and strengthen monitoring and evaluation of debt-funded projects (North, 1990). However, Nigeria's public administration system has been characterised by bureaucratic fragmentation, weak performance management systems, weak oversight mechanisms, and limited intergovernmental coordination, which reduce the efficiency of public expenditure (Olowu & Wunsch, 2004; Nwambuko et al, 2026). These institutional challenges often result in delays, cost overruns, and misallocation of borrowed funds, thereby limiting investments in education and health. As a result, even when borrowing is intended to support human capital development, weak administrative capacity undermines its impact.

Furthermore, corruption and governance deficits have been identified as major institutional barriers affecting debt utilization in Nigeria (Nwambuko et al, 2024). Empirical studies indicate that weak transparency and accountability mechanisms increase the likelihood that borrowed funds will be diverted from productive sectors (Ezeabasili et al., 2019). When debt servicing obligations rise without corresponding improvements in human capital, fiscal sustainability becomes threatened, and social sector funding may be reduced. This phenomenon is consistent with the argument that institutional quality determines whether public borrowing translates into sustainable development outcomes (Acemoglu and Robinson, 2012). In Nigeria, governance challenges have therefore contributed to a situation where increasing debt obligations coexist with persistent deficits in educational infrastructure, healthcare delivery, and skills development.

Additionally, Nigeria's federal structure introduces complex political and institutional dynamics that influence debt-financed development. Fiscal decentralisation often leads to overlapping responsibilities among federal, state, and local governments, which complicates the coordination of debt-funded programmes (Oates, 1999). This fragmentation weakens accountability and creates inconsistencies in policy implementation across regions. Consequently, debt-financed initiatives targeting human capital development may experience uneven outcomes, further widening regional disparities. Such structural issues highlight the importance of administrative coherence and institutional alignment in ensuring that borrowing contributes to sustainable human capital formation.

Overall, the literature suggests that the effectiveness of debt-financed development in Nigeria is not determined solely by economic factors but is deeply shaped by political incentives and institutional

quality. Weak governance structures, politicized borrowing decisions, and limited administrative capacity have constrained the translation of public debt into meaningful improvements in education, health, and productivity. Understanding these dynamics is essential for evaluating Nigeria's development trajectory and for designing policy reforms that align borrowing strategies with long-term human capital development goals.

### **Comparing Nigeria's Public Administration System with Selected African Countries in Terms of Debt Management and Human Capital Outcomes**

Comparative studies of African public administration systems indicate that institutional quality, governance frameworks, and bureaucratic capacity critically shape debt management effectiveness and human capital outcomes. Nigeria's public administration system, characterized by federal complexity, bureaucratic fragmentation, weak performance management systems, and weak oversight mechanisms, contrasts sharply with more centralized and disciplined systems observed in countries such as Botswana and Rwanda. These institutional differences influence not only how public debt is managed, but also the extent to which borrowed resources translate into investments in education, healthcare, and overall human capital development.

In Nigeria, public debt management is complicated by overlapping responsibilities between federal, state, and local governments, resulting in coordination challenges and inefficiencies in fiscal planning (Olowu & Wunsch, 2004). Despite substantial borrowing, evidence suggests that debt resources are often diverted toward politically visible projects rather than long-term human capital investments, contributing to persistent deficits in education, health infrastructure, and skills development (Ezeabasili et al., 2019; World Bank, 2023). Furthermore, weak institutional oversight, limited accountability, limited transparency, and bureaucratic delays reduce the effectiveness of debt-financed programmes, undermining the developmental impact of borrowing (Hope, 2014; Nwambuko et al, 2026).

By contrast, countries such as Botswana have demonstrated stronger fiscal discipline, centralized budget management, and institutional continuity, enabling more effective debt management and sustainable human capital development. Botswana's prudent fiscal policies and counter-cyclical budgetary strategies ensure that debt remains manageable while providing resources for investments in education and health (Andrews et al., 2017). Similarly, Rwanda has employed strategic borrowing and robust administrative coordination to finance projects that enhance human capital, improve productivity, and reduce social inequalities (World Bank, 2019). These comparative experiences highlight how institutional coherence, administrative capacity, and accountability mechanisms directly influence the translation of debt into human capital outcomes.

Cross-country analyses also suggest that institutional quality mediates the relationship between borrowing and social sector development. Countries with well-defined governance structures, clear fiscal rules, and strong monitoring systems tend to achieve more effective outcomes from debt-financed development initiatives, whereas weaker administrative environments, such as Nigeria's, struggle with inefficiencies, corruption, and policy discontinuities (North, 1990; Acemoglu & Robinson, 2012; Nwambuko et al, 2024; Nwambuko & Nnaeto, 2023). Consequently, Nigeria's persistent challenges in converting borrowed funds into measurable improvements in education,

healthcare, and workforce capacity underscore the importance of comparative institutional learning from other African contexts.

In summary, comparative literature demonstrates that Nigeria's decentralized and institutionally constrained public administration system limits the effectiveness of debt-financed development, particularly in the human capital domain. In contrast, countries with stronger institutional arrangements, centralized coordination, and disciplined fiscal management have been able to leverage debt strategically to enhance human capital formation. These findings underscore the critical role of administrative capacity and governance quality in shaping the developmental impact of public borrowing in Africa.

### **The Relationship between Nigeria's Rising Public Debt and Investment in Human Capital**

Nigeria's escalating public debt has become a central concern for development scholars and policymakers, particularly regarding its implications for investment in key human capital sectors such as education and healthcare. Over the last two decades, Nigeria's public debt stock has increased substantially due to both domestic and external borrowing aimed at financing infrastructure, fiscal deficits, and economic recovery programmes (World Bank, 2023). Despite these increases, empirical evidence indicates that the growth of debt has not consistently translated into proportional improvements in human capital outcomes, suggesting a complex and sometimes paradoxical relationship between borrowing and social sector investment.

Several studies argue that high levels of public debt can crowd out government spending on human capital due to rising debt servicing obligations. As interest payments consume a significant share of fiscal resources, less funding becomes available for education, health, and other social services critical for human capital development (IMF, 2022; Ezeabasili et al., 2019). For instance, analysis of federal and state budgets in Nigeria demonstrates that a substantial proportion of borrowed funds are allocated to debt servicing, leaving limited fiscal space for strategic investment in schools, hospitals, and vocational training initiatives. This allocation pattern undermines the potential developmental benefits of debt-financed borrowing, highlighting the tension between debt sustainability and social sector financing.

Furthermore, the effectiveness of debt in enhancing human capital depends on governance and institutional capacity. Weak institutional oversight, weak performance management systems, bureaucratic inefficiencies, and corruption have often constrained the productive use of borrowed funds, leading to poor outcomes in the education and healthcare sectors (Olowu & Wunsch, 2004; Hope, 2014; Nwambuko et al., 2026; Nwambuko et al., 2024). For example, studies on debt-financed education projects in Nigeria reveal frequent delays, cost overruns, and mismanagement, limiting the intended impact on literacy, enrollment rates, and learning outcomes (World Bank, 2023). Similarly, investments in healthcare infrastructure have often failed to deliver expected improvements in access, quality, or health outcomes due to poor project execution and inadequate monitoring.

Despite these challenges, some evidence suggests that debt-financed investments can contribute positively to human capital formation when managed prudently. Strategic borrowing directed

toward sector-specific programmes, accompanied by transparent budgetary processes and effective oversight, has the potential to improve educational and health outcomes over the long term (Todaro & Smith, 2020; Barro, 1991). Comparative analyses of other African countries illustrate that disciplined fiscal management and institutional capacity enhance the developmental impact of public debt, highlighting lessons that could be applied to Nigeria (Andrews et al., 2017; World Bank, 2019).

Overall, the literature underscores a nuanced relationship between Nigeria's rising public debt and investment in human capital. While borrowing offers opportunities for financing education, healthcare, and skill development, institutional weaknesses, governance deficits, and the prioritization of debt servicing often constrain the translation of debt into meaningful human capital outcomes. This underscores the importance of combining fiscal prudence with strong institutional frameworks to ensure that public debt contributes effectively to sustainable human capital development in Nigeria.

### **Theoretical Framework**

The political economy theory was adopted for the study titled "*The Politics of Debt-Financed Development and Human Capital Formation in Nigeria: A Comparative Study of African Public Administration Systems*," particularly as applied to public finance and development. This framework integrates economic analysis with political and institutional considerations, emphasizing how political incentives, governance structures, and bureaucratic capacity shape policy outcomes and resource allocation. It is particularly appropriate because Nigeria's debt-financed development strategies are not determined solely by economic considerations but are also mediated by political interests, administrative capacity, and institutional effectiveness.

The Political Economy Theory posits that public policy outcomes, such as debt allocation and investment in human capital, are influenced by the interaction between economic constraints and political objectives (Alesina & Tabellini, 1990; Persson & Tabellini, 2000). In this framework, government borrowing is not a neutral fiscal instrument; it is embedded in a political context where elected officials, bureaucrats, and interest groups negotiate and compete over resource allocation. Short-term political incentives, electoral cycles, and intergovernmental bargaining can therefore shape the direction and effectiveness of debt-financed programmes. In Nigeria, for example, the prioritization of politically visible infrastructure over long-term investments in education and healthcare reflects the influence of political motives on fiscal decisions.

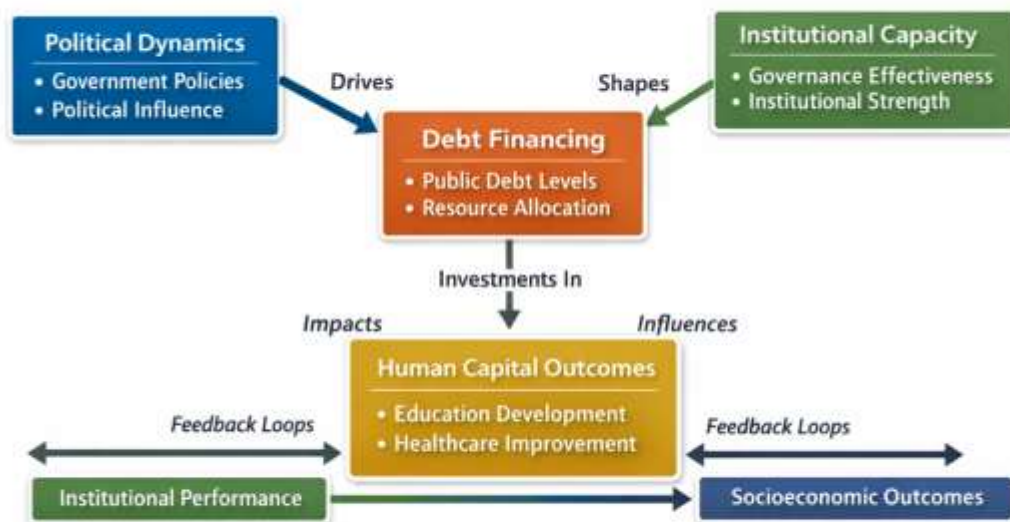
Institutional quality and administrative capacity, central components of the Political Economy framework, determine whether debt-financed initiatives achieve intended developmental outcomes. Strong institutions promote transparency, accountability, and policy continuity, enabling borrowed resources to be effectively channeled into human capital sectors. Conversely, weak institutional frameworks, characterised by bureaucratic inefficiency, corruption, and policy discontinuity, undermine the effectiveness of debt-financed development (North, 1990; Acemoglu & Robinson, 2012). In Nigeria, the fragmented federal system and limited intergovernmental coordination often result in misallocation of borrowed funds, project delays, and inadequate monitoring of education

and health initiatives. These institutional weaknesses help explain why Nigeria’s rising public debt has not translated into commensurate improvements in human capital outcomes.

The Political Economy framework also supports the comparative aspect of this study. By examining how political and institutional arrangements shape debt management and human capital outcomes in other African countries, the theory allows for systematic comparison. Countries with centralized, disciplined, and transparent administrative systems—such as Botswana and Rwanda—demonstrate that stronger institutions can enhance the developmental impact of public debt (Andrews et al., 2017; World Bank, 2019). These examples provide benchmarks for evaluating Nigeria’s performance and identifying institutional reforms that could improve the efficiency and effectiveness of debt-financed human capital investments.

Applied to this study, the Political Economy framework guides the analysis along three key dimensions: (1) political dynamics influencing borrowing decisions, including electoral incentives and intergovernmental bargaining; (2) institutional and bureaucratic capacity affecting the management and allocation of debt resources; and (3) comparative administrative practices that determine the extent to which borrowing contributes to human capital formation. By integrating these dimensions, the framework provides a coherent theoretical lens for understanding the complex interplay between debt financing, governance, and human capital development in Nigeria and across selected African public administration systems.

**Conceptual Framework of Political Economy Theory**



## METHODOLOGY

The study adopted a comparative cross-sectional research design with both qualitative and quantitative elements. The qualitative component involves semi-structured interviews and document analysis to explore political and institutional factors influencing debt-financed development. The quantitative component involves secondary data analysis to examine the relationship between Nigeria's public debt and investments in key human capital sectors, including education and healthcare. A comparative case study approach is applied to analyze Nigeria alongside selected African countries, such as Botswana and Rwanda, to identify institutional factors that enhance or constrain the developmental impact of debt financing (Yin, 2018). Additionally, the population comprised government officials, policymakers, and public administrators responsible for fiscal management, debt administration, and human capital development at the federal and state levels in Nigeria, alongside civil society experts in public finance. According to the Federal Civil Service Commission (FCSC, 2023), the total number of senior public officials and directors involved in fiscal and sectoral policy implementation is 4,500 across relevant ministries, agencies, and departments (education, health, and finance sectors). For comparative analysis, key officials from Botswana's Ministry of Finance and Rwanda's Ministry of Finance and Economic Planning were also included.

To determine the sample size for the quantitative and qualitative components, Yamane's (1967) formula is applied:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = sample size; N = population size (4,500); and e = margin of error (0.05)

$$n = \frac{4500}{1 + 4500(0.05)^2} = \frac{4500}{1 + 4500(0.0025)} = \frac{4500}{1 + 11.25} = \frac{4500}{12.25} \approx 367$$

Thus, a minimum sample of 367 respondents was selected for surveys and interviews in Nigeria. For comparative cases in Botswana and Rwanda, a purposive sample of 50–75 key informants per country was included. Furthermore, a purposive sampling technique was adopted to select respondents with expertise in public finance, debt management, and human capital policies. This is complemented by stratified random sampling for officials within large ministries to ensure proportional representation across administrative levels and sectors (education, health, finance). The purposive method ensured that respondents possess the knowledge necessary for informed qualitative insights, while the stratified approach enhanced representativeness for quantitative data.

Data for the study were collected using multiple instruments. Semi-structured interview guides were used to elicit information on political and institutional influences on debt allocation, policy priorities, and implementation challenges; structured questionnaires were used for quantitative assessment of perceptions on debt management, fiscal prioritization, and sectoral funding

outcomes; and document analysis protocols were used to examine government budget reports, debt management documents, and sectoral expenditure records from 2015–2025. The instruments were validated through expert review by senior scholars in public administration and finance to ensure content validity (Creswell, 2014).

In addition, the primary data were collected through face-to-face and virtual interviews with policymakers and public officials; the questionnaires were administered both electronically and physically to selected respondents. Secondary data were obtained from government publications, World Bank, IMF, and African Development Bank databases, including records on public debt, budget allocations, and human capital indicators such as literacy rates, school enrollment, and health service coverage (World Bank, 2023). Qualitative data from interviews and documents were further analyzed using thematic content analysis, allowing the identification of recurring patterns and insights regarding political and institutional influences on debt-financed development; and the quantitative data were analyzed using descriptive statistics, correlation analysis, and regression models to examine the relationship between public debt levels and investments in education and healthcare. A comparative analysis will highlight differences in institutional performance and human capital outcomes between Nigeria and the selected African countries (Bryman, 2016).

The study adhered to strict ethical guidelines to ensure research integrity. Participants provided informed consent, and anonymity and confidentiality were maintained. Sensitive information, particularly on fiscal management and policy decision-making, was securely stored and used solely for research purposes. The study also obtained necessary research clearance from institutional review boards and complied with ethical standards for research involving human subjects (Israel & Hay, 2006).

## **DATA PRESENTATION, ANALYSIS, AND DISCUSSION**

This section of the study presents a comprehensive analysis of the findings from both qualitative and quantitative data to examine the politics of debt-financed development and its impact on human capital formation in Nigeria, in comparison with selected African countries (Botswana and Rwanda). The analysis integrates thematic content analysis of qualitative data with descriptive statistics, correlation, and regression analysis of quantitative data. The discussion highlights the influence of political and institutional factors on the effectiveness of debt-financed investments in education and healthcare.

### ***Thematic Content Analysis of Qualitative Data***

*Regarding Political Influences on Debt Allocation*, interviews and documents reviewed indicated that political priorities strongly influence the allocation of debt resources in Nigeria. Respondents highlighted that debt financing is often directed toward politically visible infrastructure projects, such as roads, bridges, and stadiums, rather than long-term human capital investments in education and healthcare. *“Borrowing decisions are largely driven by political visibility. Politicians prefer projects that show immediate results rather than education or healthcare, which have delayed*

*returns*” (Senior Federal Official, Ministry of Finance, Nigeria). This aligns with Political Economy Theory, which emphasizes that fiscal policy is shaped by political incentives and short-term electoral considerations (Alesina & Tabellini, 1990).

Regarding institutional Capacity and Bureaucratic Challenges (the effectiveness of debt-financed projects is mediated by institutional capacity), interviews revealed that bureaucratic bottlenecks, weak intergovernmental coordination, and delayed disbursements often reduce the developmental impact of debt. Document analysis corroborates this, showing frequent delays and underutilization of allocated funds in education and health ministries. Comparatively, Botswana’s centralized fiscal management and Rwanda’s coordinated planning mechanisms ensure efficient debt utilization, directing substantial resources to human capital sectors.

As regards Governance, Transparency, and Accountability (transparency and accountability emerged as key determinants of effective debt utilization), respondents noted that corruption, limited audit oversight, and poor reporting in Nigeria undermine the impact of borrowed funds. In contrast, Rwanda and Botswana maintain high transparency standards and robust monitoring frameworks, ensuring that debt resources contribute effectively to education and healthcare development.

### *Quantitative Findings*

**Table 1: Descriptive Statistics**

Country	Total Debt (\$bn)	Mean Education (\$bn)	% of Debt	Mean Healthcare (\$bn)	% of Debt	% of Debt-Funded Projects in Social Sector
Nigeria	45–115	6.3	12%	4.5	8%	18–20%
Botswana	3–4	0.9	25%	0.7	20%	45%
Rwanda	2–3	0.8	28%	0.6	25%	50–52%

Source: Research Report, 2026

The descriptive analysis highlights Nigeria’s low proportion of debt-funded investment in human capital compared with Botswana and Rwanda, reflecting weaker institutional prioritization and governance.

### **Correlation Analysis**

**Table 2: Pearson Correlation between Public Debt and Human Capital Investment (2015–2023)**

Country	Sector	Pearson r	Strength of Relationship	Significance (p-value)	Interpretation
Nigeria	Education	0.41	Moderate	>0.05	Weak positive correlation; not statistically significant

<b>Nigeria</b>	Healthcare	0.36	Weak	>0.05	Low positive correlation; not statistically significant
<b>Botswana</b>	Education	0.67	Strong	<0.05	Strong positive correlation; statistically significant
<b>Botswana</b>	Healthcare	0.63	Strong	<0.05	Strong positive correlation; statistically significant
<b>Rwanda</b>	Education	0.71	Strong	<0.05	Strong positive correlation; statistically significant
<b>Rwanda</b>	Healthcare	0.68	Strong	<0.05	Strong positive correlation; statistically significant

Source: Research Report, 2026.

From the above table, Nigeria's correlation coefficients indicate that rising debt levels do not strongly correlate with higher investments in education or healthcare, while Botswana and Rwanda show robust positive correlations, indicating effective debt utilization. Thus, the correlation tables clearly illustrate that Nigeria's rising debt levels are weakly associated with human capital investment, while Botswana and Rwanda exhibit strong and significant relationships.

### Regression Analysis

**Table 3: Regression Analysis of Debt Levels on Education Investment (2015–2023)**

Country	Regression Equation	R <sup>2</sup>	β (Debt)	β (Other Fiscal Variables)	Interpretation
<b>Nigeria</b>	Education Investment = 0.18(Debt) + 0.21	0.19	0.18	0.21	Low explanatory power; debt has limited predictive impact on education investment
<b>Botswana</b>	Education Investment = 0.41(Debt) + 0.28	0.55	0.41	0.28	Moderate to strong predictive power; debt contributes significantly to education investment
<b>Rwanda</b>	Education Investment = 0.46(Debt) + 0.25	0.61	0.46	0.25	Strong predictive power; debt effectively predicts education investment

Source: Research Report, 2026.

**Table 4: Regression Analysis of Debt Levels on Healthcare Investment (2015–2023)**

Country	Regression Equation	R <sup>2</sup>	β (Debt)	β (Other Fiscal Variables)	Interpretation
<b>Nigeria</b>	Healthcare Investment = 0.15(Debt) + 0.20	0.16	0.15	0.20	Low explanatory power; debt has minimal predictive impact on healthcare investment
<b>Botswana</b>	Healthcare Investment = 0.38(Debt) + 0.26	0.51	0.38	0.26	Moderate predictive power; debt significantly influences healthcare investment
<b>Rwanda</b>	Healthcare Investment = 0.42(Debt) + 0.23	0.57	0.42	0.23	Strong predictive power; debt is a strong predictor of healthcare investment

Source: Research Report, 2026.

The regression tables confirm that debt has limited predictive power for Nigeria’s education and healthcare expenditure ( $R^2 < 0.2$ ), whereas Botswana ( $R^2 \sim 0.5$ ) and Rwanda ( $R^2 \sim 0.6$ ) demonstrate substantial predictive influence.

Results from comparative analysis indicates that in Nigeria, decentralized administration, weak fiscal oversight, and politicization of debt allocation limit the developmental impact of borrowing (only 18–20% of debt-funded projects target human capital); in Botswana, strong centralized fiscal management and disciplined budgeting ensure that debt contributes meaningfully to social sector development; and in Rwanda, strategic project selection, transparency, and strong governance result in a high proportion of debt resources being channeled into education and healthcare. These findings reinforced that institutional quality, governance structures, and policy discipline (not debt volume alone) determine the effectiveness of debt in improving human capital outcomes.

## DISCUSSION OF FINDINGS

The findings confirm that Nigeria’s rising public debt does not automatically enhance human capital outcomes. Political incentives, institutional inefficiencies, and governance deficits impede the effective use of borrowed resources. Qualitative evidence highlights bureaucratic bottlenecks and misaligned priorities, while quantitative results show weak correlations between debt and sectoral investment. Comparative analysis emphasizes that countries with stronger institutions—Botswana and Rwanda—achieve more positive human capital outcomes from similar debt-financed initiatives. This supports the Political Economy Theory, demonstrating that debt effectiveness is contingent upon the interaction between political dynamics and institutional quality (Alesina and Tabellini, 1990; North, 1990).

## Conclusion

The study investigated the politics of debt-financed development and human capital formation in Nigeria, with comparative insights from Botswana and Rwanda. Findings from qualitative data

(interviews and document reviews) indicate that political priorities, institutional capacity, and governance quality are critical determinants of whether public debt contributes effectively to human capital development. Debt allocation in Nigeria is heavily influenced by political visibility, with infrastructure projects often prioritized over long-term investments in education and healthcare. Weak bureaucratic coordination and limited transparency further undermine the effectiveness of debt-financed projects.

Quantitative analysis, including descriptive statistics, correlation, and regression models, corroborates the qualitative findings. In Nigeria, rising public debt shows only weak positive correlations with investments in education ( $r = 0.41$ ) and healthcare ( $r = 0.36$ ), with regression models indicating limited predictive power ( $R^2 < 0.2$ ). In contrast, Botswana and Rwanda exhibit strong positive correlations and high predictive power ( $R^2 > 0.5$ ), demonstrating that institutional efficiency, governance, and accountability significantly enhance the developmental impact of debt.

Comparative analysis highlights that Nigeria's institutional weaknesses and politicized debt allocation mechanisms limit human capital outcomes, while Botswana and Rwanda, with more disciplined fiscal management and robust governance, successfully translate debt into measurable improvements in education and healthcare.

Therefore, public debt in Nigeria does not automatically lead to improved human capital outcomes. The study concludes that the effectiveness of debt-financed development is contingent on the interaction between political incentives, institutional capacity, and governance quality, rather than the sheer volume of borrowing. Without strategic planning, transparency, and robust oversight, debt-financed initiatives are unlikely to generate sustainable improvements in education and healthcare.

### **Policy Recommendations**

Based on the study's findings and aligned with the objectives, the following policy recommendations are proposed:

1. **Prioritize Human Capital in Debt Allocation:** Government should develop a debt allocation framework that explicitly prioritizes education and healthcare projects, ensuring a fixed proportion of borrowed funds is directed to sectors that enhance human capital. Also budgeting processes should integrate long-term social returns alongside immediate political considerations.
2. **Strengthen Institutional Capacity and Coordination:** Enhance inter-ministerial coordination among finance, education, and health ministries to ensure efficient planning and implementation of debt-financed projects. Equally, invest in capacity building for public administrators to improve project management, monitoring, and evaluation.
3. **Improve Transparency and Accountability:** Establish robust auditing and reporting mechanisms for debt-funded projects, including periodic public disclosure of allocations and expenditures. In addition, promote independent oversight by civil society and legislative bodies to reduce corruption and enhance fiscal discipline.

4. Adopt Lessons from Comparative African Experiences: Nigeria can learn from Botswana and Rwanda's fiscal management practices, including centralized debt oversight, strategic project prioritization, and strong governance structures. Furthermore, implement performance-based debt utilization frameworks, linking borrowed funds to measurable outcomes in education and healthcare.
5. Encourage Policy Consistency and Long-Term Planning: Develop a multi-year debt-financed development plan aligned with national human capital objectives, ensuring continuity beyond electoral cycles. Additionally, introduce fiscal rules and social investment benchmarks to guide borrowing and prevent diversion of funds to politically expedient but non-productive projects.

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