Public Debt, Governance Quality, And Human Development: Empirical Evidence From West Africa

Bright Orhewere[1], *Evelyn N Ogbeide-Osaretin[2]
[1]Department of Economics, Western Delta University, Oghara, Delta State, Nigeria.
[2]Department of Economics, Edo State University, Iyamho, Edo State, Nigeria.

***Corresponding Author**

Received: Sep 7, 2025; Revised: Dec 23; Accepted: Dec 27; Published: Dec 30, 2025

COPYRIGHT: Orhewere and Ogbeide-Osaretin. It is an open-access article published under the Creative Commons Attribution License (CC BY) terms. It permits anyone to copy, distribute, transmit, and adapt the work, provided the original work and source are appropriately cited.

CITATION: Orhewere B, Ogbeide-Osaretin EN, 2025. Public Debt, Governance Quality, And Human Development: Empirical Evidence From West Africa. *Management and Economics Research Journal,* 11(4): 9900117. https://doi.org/10.18639/MERJ.2025.9900117

ABSTRACT
This study examines the impact of public debt, governance quality, and debt servicing on human development in West Africa, within the framework of the Dual Gap Theory. Using balanced panel data for 17 West African countries covering the period 2010–2024, the HDI is employed as a comprehensive measure of development outcomes. To account for endogeneity, heterogeneity, and distributional effects, the study applied a combination of QvM regression and system GMM. The empirical results reveal that government debt and debt service payments exerted a consistently negative and statistically significant effect on human development across the entire development distribution, with the strongest adverse impacts observed at median development levels. In contrast, governance quality emerges as the most influential positive determinant of human development, significantly enhancing the effectiveness of public resources and mitigating the adverse effects of debt. Gross fixed capital formation and trade openness also contribute positively to human development, underscoring the roles of investment and external sector integration in alleviating savings–investment and foreign exchange constraints. Diagnostic tests confirm the validity and robustness of the GMM estimates. Overall, the evidence suggests that public debt can undermine human development in West Africa when not supported by strong institutions and productive investment. The study has highlighted the central importance of governance reforms, prudent debt management, and strategic investment and trade policies in advancing sustainable human development across the region.

KEYWORDS: Public Debt; Governance Quality; Human Development; Dual Gap Theory; Quantile Regression; West Africa.

ABBREVIATIONS: HDI: Human Development Index; QvM: Quantile via Moments; GMM: Generalized Method of Moments; ARDL: Autoregressive Distributed Lag; GDBT: Government Debt; QOG: Quality of Governance; GFCF: Gross Fixed Capital Formation; TOPN: Trade Openness; DSP: Debt Service Payments;

1. INTRODUCTION

Governance quality has increasingly emerged as a central concern in both developed and developing economies, particularly in shaping the effectiveness of public policy and fiscal outcomes. In the context of public debt management, governance determines whether borrowed resources are channelled into productive investments or dissipated through inefficiencies, rent-seeking, and corruption [1,2]. While Keynesian economic theory suggests that government borrowing and expenditure can stimulate economic activity and enhance welfare, such outcomes are contingent on institutional capacity and accountability. In the absence of strong governance structures, public debt may fail to be translated into improved development outcomes and instead exacerbate macroeconomic vulnerabilities.

The notion of economic development has also evolved beyond income-based measures to encompass broader dimensions of human welfare, including health, education, and living standards. This shift is reflected in the growing use of multidimensional indicators, such as the HDI, which aligns with Amartya Sen's capability approach, which emphasizes human freedom, well-being, and quality of life as the ultimate objectives of development [3,4]. Consequently, understanding how public debt and governance interact to influence human development outcomes has become an important empirical and policy question.

Economic theory and empirical evidence suggest a circular and reinforcing relationship between public debt, governance quality, and development. Excessive debt can undermine governance by weakening institutions, increasing opportunities for corruption, and constraining policy autonomy. Poor governance, on the other hand, can worsen debt dynamics through fiscal indiscipline, inefficient public spending, and weak revenue mobilization [5,6]. This vicious cycle poses a serious challenge to achieving the Sustainable Development Goals, particularly in developing regions with limited fiscal space and fragile institutions [7].

Public debt plays a dual role in economic development, especially in low- and middle-income countries where domestic savings are insufficient to finance large-scale development projects. When effectively managed, debt can support investments in infrastructure, education, healthcare, and industrial development, thereby fostering long-term growth. However, when debt exceeds sustainable thresholds, it can generate adverse consequences, including high debt-service burdens, reduced public investment, fiscal austerity, and slower development progress [8,9]. Debt servicing obligations, in particular, tend to crowd out social spending, undermining improvements in human development indicators.

Governance quality plays a decisive role in mediating the development effects of public debt. Countries with strong institutions, transparent fiscal frameworks, and effective public sector management are better positioned to utilize borrowed funds productively. In contrast, weak governance environments are often associated with misallocation of resources, corruption, and limited development returns from borrowing [10]. As such, debt-financed development strategies are unlikely to succeed in the absence of institutional reforms that strengthen accountability and policy effectiveness.

These challenges are particularly pronounced in West Africa, a region endowed with abundant natural resources yet persistently constrained by weak institutions, governance deficits, and rising public debt levels. Governance in many West African countries is characterized by political instability, limited regulatory effectiveness, and high corruption, which erode public trust and weaken fiscal discipline. Transparency International [11] reports consistently low Corruption Perceptions Index scores across the region, indicating deep-rooted governance challenges. Similarly, the World Bank's Worldwide Governance Indicators show that most West African countries score below the global average across key governance dimensions, including rule of law, government effectiveness, and control of corruption [12].

Public debt levels in West Africa have increased markedly over the past decades, driven by infrastructure financing needs, recurrent fiscal deficits, commodity price shocks, and higher access to international capital markets. According to the World Bank [12] and the International Monetary Fund [13], several countries in the region, such as Ghana, Nigeria, Senegal, and Côte d'Ivoire, have experienced sharp increases in debt-to-GDP ratios, raising concerns about debt sustainability and fiscal resilience. The African Development Bank [14] similarly warns that rising debt-service obligations are constraining public investment in critical social sectors, thereby undermining development prospects.

Recent country-specific developments further highlight the urgency of this issue. Nigeria's governance indicators remain persistently negative across all dimensions of the World Governance Indicators, reflecting institutional fragility and policy uncertainty. At the same time, rising debt-service costs have significantly limited fiscal space, with adverse implications for welfare and human development outcomes. Comparable trends are evident in other West African economies, where weak governance structures have contributed to inefficient debt utilization and heightened vulnerability to fiscal crises [15,16].

Despite a growing body of literature on public debt, governance, and economic growth, several gaps remain. Much of the existing research focuses primarily on income-based growth measures, overlooking broader human development outcomes. Moreover, studies that jointly examine public debt and governance often fail to account for heterogeneity across development levels or rely on outdated data. While seminal works by Easterly [5], Reinhart and Rogoff [8], Acemoglu *et al*. [2], Ehikioya *et al*. [17] and Mosikari and Eita [18] underscore the importance of debt sustainability and institutions, there remains limited empirical evidence on how governance quality conditions the human development effects of public debt in West Africa using recent data and advanced econometric techniques.

This study, therefore, seeks to address these gaps by empirically examining the relationship between public debt, governance quality, and human development in West Africa over the period 2010–2024. By employing the HDI as a multidimensional measure of economic development and applying robust econometric methods that account for heterogeneity and endogeneity, the study provides new insights into the development implications of debt and governance in the region. Specifically, the study aims to assess the impact of public debt and debt servicing on human development outcomes and to examine the role of governance quality in shaping these effects. The findings are expected to offer important policy guidance on sustainable debt management and institutional reforms necessary for achieving inclusive and durable development in West Africa.

2. LITERATURE REVIEW

2.1 CONCEPTUAL LITERATURE REVIEW

PUBLIC DEBT AND ECONOMIC DEVELOPMENT

Public debt—also referred to as government or sovereign debt—represents the cumulative borrowing of a government net of repayments, primarily denominated in domestic or foreign currency. It is conceptually distinct from external debt, which includes obligations owed by both public and private sectors to foreign creditors. Nonetheless, public debt dynamics often influence broader debt conditions in an economy, as rising sovereign risk premiums tend to increase borrowing costs across sectors.

The role of public debt in economic development is inherently ambivalent. On the one hand, public borrowing can serve as a critical financing mechanism for development, particularly in low- and middle-income countries where domestic savings are insufficient to support large-scale investments in infrastructure, education, healthcare, and industrialization [5, 12]. When effectively managed, debt-financed expenditure can enhance productive capacity, stimulate employment, and improve welfare outcomes.

On the other hand, excessive public debt poses significant risks to macroeconomic stability and long-term development. High debt levels can crowd out private investment, increase macroeconomic uncertainty, and divert fiscal resources toward debt servicing at the expense of social spending [8]. The debt overhang hypothesis further posits that when debt levels exceed a country's repayment capacity, expectations of future taxation or default discourage investment and slow economic growth [19]. Consequently, the development impact of public debt depends critically on its size, composition, and management.

GOVERNANCE AND ECONOMIC DEVELOPMENT

Governance broadly refers to the traditions, institutions, and processes through which authority is exercised, and public resources are managed [20]. It encompasses key dimensions such as accountability, transparency, regulatory quality, government effectiveness, rule of law, and control of corruption. A growing body of literature emphasizes that governance quality is a fundamental determinant of development outcomes.

Strong governance frameworks promote efficient allocation of resources, reduce corruption, enhance investor confidence, and support sustainable economic growth. Empirical studies consistently show that countries with higher-quality institutions experience faster and more inclusive development [21,8]. Conversely, weak governance leads to resource misallocation, rent-seeking behaviour, fiscal indiscipline, and declining public trust, all of which undermine development performance. From a human development perspective, governance quality directly affects the delivery of public services such as education, healthcare, and social protection. Poor governance, therefore, not only constrains economic growth but also limits improvements in human welfare and living standards.

INTERRELATIONSHIP BETWEEN PUBLIC DEBT AND GOVERNANCE

The relationship between public debt and governance is bidirectional and mutually reinforcing. On one hand, weak governance can exacerbate debt accumulation through inefficient public spending, weak revenue mobilization, and a lack of fiscal discipline. In such contexts, borrowed resources are more likely to be misused or diverted through corruption, yielding limited development returns [10].

On the other hand, high debt levels can undermine governance by increasing fiscal stress and encouraging non-transparent financial practices. Governments facing debt distress may resort to short-term policy measures, reduced accountability, or politically motivated borrowing decisions, thereby weakening institutional quality [22]. Moreover, external borrowing often comes with conditionalities imposed by international financial institutions, which—while aimed at restoring macroeconomic stability—may generate social discontent and governance challenges if poorly implemented [23]. Conversely, strong governance enhances a country's capacity to manage debt sustainably by improving fiscal planning, debt transparency, and public financial management systems [24]. This reciprocal relationship underscores the importance of jointly analyzing public debt and governance in understanding development outcomes.

2.2 THEORETICAL LITERATURE REVIEW

2.2.1 KEYNESIAN THEORY OF PUBLIC DEBT

The Keynesian theory of public debt, originating from Keynes' *General Theory,* argues that government borrowing and expenditure can play a stabilizing role in the economy, particularly during periods of underemployment and economic downturns. Contrary to classical economic views, Keynesian theory holds that public debt does not necessarily impose a burden on the economy if borrowed funds are used productively.

Government borrowing can correct market failures, stimulate aggregate demand, and finance critical public investments that support growth and welfare [25,26]. From this perspective, public debt can enhance economic performance and development when supported by sound fiscal management and effective institutions. This theory underpins the argument that debt-financed public spending can contribute positively to development, particularly in contexts of infrastructural and human capital deficits.

2.2.2 DEBT OVERHANG THEORY

The Debt Overhang Theory, formalized by Krugman [19], describes a situation in which a country's expected future debt obligations exceed its capacity to repay. Under such conditions, the anticipated burden of debt discourages both domestic and foreign investment, as investors expect that future returns will be taxed away to service debt.

Cohen [27] further demonstrated that public debt exhibits a nonlinear relationship with growth and investment, suggesting that moderate levels of debt may stimulate economic activity, while excessive accumulation generates diminishing and eventually negative returns. Empirical studies have identified an inverted U-shaped relationship between public debt and economic growth, lending support to the debt overhang hypothesis [28-30]. This theory is relevant to the present study as it highlights that the development impact of public debt depends on debt sustainability and effective utilization, particularly in economies with limited fiscal space.

2.2.3 PUBLIC CHOICE THEORY

Public Choice Theory applies economic reasoning to political decision-making, emphasizing that political actors—including politicians, bureaucrats, and voters—are driven by self-interest rather than purely by social welfare considerations [31]. In the context of public debt, this theory suggests that governments may engage in excessive borrowing to finance politically motivated spending, secure electoral support, or expand bureaucratic influence.

Such behaviour can result in fiscal indiscipline, inefficient allocation of resources, and long-term debt sustainability challenges. Public Choice Theory thus provides a framework for understanding how governance failures, rent-seeking, and political incentives can lead to unsustainable debt accumulation and poor development outcomes.

2.2.4 HUMAN DEVELOPMENT THEORY

Human Development Theory, advanced by Sen [3] and operationalized by the United Nations Development Programme, represents a departure from traditional growth-centric approaches to development. The theory emphasizes expanding individuals' capabilities and freedoms, rather than focusing solely on income growth.

The HDI, introduced in 1990, captures this multidimensional perspective by incorporating indicators of health, education, and income. This framework is particularly relevant for assessing the development implications of public debt and governance, as it highlights how fiscal and institutional factors influence broader welfare outcomes beyond GDP growth.

2.2.5 INSTITUTIONAL QUALITY THEORY

Institutional Quality Theory asserts that the effectiveness of economic policies—including public debt management—depends fundamentally on the quality of a country's institutions [21,2]. Institutions shape incentives, constrain opportunistic behavior, and determine how public resources are allocated and utilized.

In countries with strong institutions, public debt is more likely to finance productive investments and support sustainable development. In contrast, weak institutional environments characterized by corruption, poor regulatory quality, and ineffective public administration often experience misallocation of borrowed funds and heightened vulnerability to debt crises [32,8]. This theory provides the central analytical foundation for the present study, emphasizing that governance quality is a critical mediating factor in the relationship between public debt and human development outcomes in West Africa.

2.3 EMPIRICAL LITERATURE REVIEW

Empirical studies on public debt, governance, and development reveal mixed and context-specific outcomes, reflecting differences in institutional quality, debt composition, and levels of economic development. Existing evidence can be broadly categorized into studies examining (i) public debt and economic growth or development, (ii) governance and development outcomes, and (iii) the combined effects of debt and governance.

PUBLIC DEBT AND ECONOMIC GROWTH OR DEVELOPMENT

A substantial body of empirical literature examines the relationship between public debt and economic growth, often producing non-linear and threshold-dependent results. For Nigeria, Nzeh [33] employed annual data from 1981 to 2018 and the ARDL bounds testing approach, finding that public debt positively affects economic growth in both the short and long run. The study further identified an optimal debt threshold of approximately 40.2% of GDP, beyond which the growth benefits diminish.

At the regional level, Ehikioya *et al*. [17] analyzed the impact of external debt on development in 43 African countries using system GMM over the period 2001–2018. Their findings suggest that while external debt may support development in the short run, its long-run effects become negative beyond a country's absorptive and institutional capacity, largely due to implementation inefficiencies. Similarly, the International Monetary Fund [34], using a large panel of 178 countries from 1995 to 2020, reported that unexpected increases in public debt tend to depress real GDP in countries with high initial debt levels, while having expansionary effects in low-income countries and post-HIPC economies.

Country-specific nonlinear evidence further reinforces the debt threshold hypothesis. Mosikari and Eita [18], using a nonlinear ARDL framework for Namibia (1980–2019), found that increases in public debt reduce GDP growth, while debt reductions stimulate growth. In Ethiopia, Abate [35] employed multiple nonlinear techniques and established the presence of asymmetric and threshold effects, showing that public debt enhances growth only when it remains significantly below critical thresholds. These findings align with earlier empirical work by Reinhart and Rogoff [8], which emphasizes the growth-reducing effects of excessive public debt.

GOVERNANCE AND ECONOMIC DEVELOPMENT

A parallel strand of literature highlights governance quality as a key determinant of economic growth and development. Fawaz *et al*. [36] examined governance–growth linkages in 111 developing countries between 1996 and 2018, distinguishing between high- and low-income developing economies. Their results show that the rule of law and control of corruption significantly enhance per capita income, while the effects of voice and accountability vary across income groups.

Azam [37], focusing on 14 Latin American and Caribbean countries, applied the ARDL/pooled mean group approach and found that corruption negatively affects economic growth, whereas political stability and government effectiveness exert positive long-run effects. In Sub-Saharan Africa, Feyisa *et al*. [38] used panel data for 34 countries and demonstrated that governance indicators such as control of corruption, government effectiveness, regulatory quality, and rule of law positively influence real GDP per capita. However, political stability and voice and accountability were found to be statistically insignificant.

Using a dynamic GMM framework, Vachuiden and Ngouhouo [39] assessed governance and economic development in 33 Sub-Saharan African countries over 1996–2018. Their findings suggest that political stability and government effectiveness significantly promote development, while other governance indicators exhibit mixed effects. These results underscore the heterogeneous impact of governance dimensions on development outcomes across African economies.

GOVERNANCE, DEBT, AND WELFARE OUTCOMES

More recent studies extend the governance–development nexus beyond growth to broader welfare indicators. Effiong *et al*. [40] examined governance and economic misery in 16 West African countries from 2005 to 2020 using multiple estimation techniques. Their findings reveal that government effectiveness, political stability, and regulatory quality reduce economic distress, while the effects of voice and accountability and rule of law vary across estimation methods. Importantly, trade liberalization and private sector credit were found to alleviate economic hardship, highlighting the relevance of complementary macroeconomic policies.

2.4 RESEARCH GAP

Although extensive empirical literature exists on public debt and economic growth [5,8] and on governance and development [2,36], several gaps remain. First, empirical research jointly examining public debt, governance quality, and multidimensional development outcomes—such as human development—remains limited, particularly in the West African context. Most studies rely on income-based indicators of development, focusing on GDP growth rather than broader welfare measures, and often analyze debt or governance in isolation, thereby overlooking multidimensional welfare outcomes captured by the HDI. Second, empirical analyses that simultaneously consider public debt and governance quality are relatively scarce and are largely conducted outside the West African region [6].

Third, existing studies often fail to account for heterogeneity across countries with different institutional capacities and development levels, and many rely on outdated data. Finally, limited attention has been paid to how specific governance mechanisms—such as political stability, rule of law, and government effectiveness—condition the development impact of public debt.

This study addresses these gaps by providing a comparative analysis of West African countries using recent data and robust econometric techniques. By jointly examining public debt, governance quality, and human development outcomes, the study contributes new empirical evidence on the institutional conditions under which debt-financed development can be effective in West Africa.

3. METHODOLOGY

3.1 THEORETICAL FRAMEWORK

This study is anchored on the Dual-Gap Theory, originally advanced by Chenery and Strout [41] and further elaborated by Chenery [42], which extends the Harrod–Domar growth framework. The theory posits that economic growth and development in developing countries are constrained by two fundamental structural gaps: the savings–investment gap and the foreign exchange gap.

The Harrod–Domar model expresses economic growth as:

$$g = s/k \qquad (3.1)$$

where g denotes the growth rate of output, s is the savings rate, and k is the capital–output ratio. In many developing economies, domestic savings are insufficient to finance the level of investment required to achieve targeted growth rates, giving rise to the savings–investment (S–I) gap.

The Dual-Gap model introduces an additional constraint—the foreign exchange gap—arising from insufficient export earnings to finance the imports of capital goods and intermediate inputs necessary for development. Formally, the growth equation is extended as:

$$g = s/k + c/k \tag{3.2}$$

where c represents net foreign capital inflows. In an open economy, national income is defined as:

$$Y = C + I + X – M \tag{3.3}$$

where Y is national income, C is consumption, I is investment, X is exports, and M is imports. Rearranging yields:

$$S - I = X – M \tag{3.4}$$

This identity illustrates that when domestic savings fall short of investment requirements, external financing—through foreign loans, aid, or foreign direct investment—becomes essential to bridge both the savings and foreign exchange gaps.

In the context of West Africa, public debt constitutes a key mechanism through which governments attempt to close these development gaps. However, the Dual-Gap framework implicitly assumes effective utilization of external resources. In reality, governance quality determines whether borrowed funds translate into productive investment and improved welfare or exacerbate fiscal vulnerabilities. Weak institutions, corruption, and poor public financial management can undermine the growth and development benefits of debt, leading to debt overhang and persistent underdevelopment. Thus, the Dual-Gap Theory provides a suitable conceptual foundation for examining how public debt, conditioned by governance quality, influences human development outcomes in West Africa.

3.2 METHOD OF DATA ANALYSIS

To estimate the empirical relationships, the study employs a combination of the QvM estimator and the GMM. This dual-estimation strategy is adopted to address key econometric challenges common in macro-panel analyses, including heterogeneity, endogeneity, and dynamic feedback effects.

The QvM approach, developed by Machado and Silva [43], allows the estimation of conditional effects across different points of the HDI distribution. Unlike mean-based estimators, QvM captures heterogeneity in the debt–development and governance–development relationships across countries at varying development levels. This is particularly relevant for West Africa, where substantial cross-country disparities in institutional quality and human development exist.

To complement the quantile analysis, the study employs the dynamic panel GMM estimator, following Arellano and Bond [44] and Blundell and Bond [45]. The GMM framework effectively addresses endogeneity arising from reverse causality, omitted variable bias, and unobserved country-specific effects by using internal instruments derived from lagged values of the regressors. This approach is widely applied in macroeconomic and development studies involving debt and governance [6,32].

The combined use of QvM and GMM ensures robust inference by capturing both distributional heterogeneity and dynamic causal relationships.

3.3 MODEL SPECIFICATION

The empirical model is adapted from the Solow growth framework and closely follows the specification employed by Musa *et al*. [46], who examined the relationship between public debt, governance, and economic growth in developing countries. While Musa *et al*. [46] used real GDP as the dependent variable, this study extends the literature by replacing GDP with the HDI to reflect a multidimensional conception of development. Additionally, debt service payment is introduced to capture the fiscal burden of debt, replacing the labour force variable used in earlier growth-focused studies. The model is specified as follows:

$$HDIi\,t = f(GDBTit, QOGit, GFCFit, TOPNit, DSPit)) \tag{3.5}$$

$$HDIit=\beta 0+\beta 1 GDBTit+\beta 2 QOGit+\beta 3 GFCFit+\beta 4 TOPNit+\beta 5 DSPit+\mu it \tag{3.6}$$

where i denotes the country, and t denotes the time.

VARIABLE DEFINITIONS

- **HDI**: Human Development Index, capturing health, education, and income dimensions.
- **GDBT**: Government debt (percentage of GDP).
- **QOG**: Quality of governance, proxied by composite governance indicators.
- **GFCF**: Gross fixed capital formation, representing physical capital accumulation.

- **TOPN**: Trade openness, measured as the ratio of total trade to GDP.
- **DSP**: Debt service payment, reflecting the fiscal cost of debt.
- **μ_{it}**: Error term.

3.4 SOURCES OF DATA

The study utilizes annual panel data covering the period 2010–2024 for 16 West African countries, subject to data availability. All variables are obtained from reputable and internationally recognized secondary sources to ensure data reliability and consistency. These include the World Development Indicators, the World Bank, the Government Finance Statistics, the International Country Risk Guide for governance indicators, and the International Monetary Fund databases. The choice of this period allows the analysis to capture recent post-global-financial-crisis dynamics, rising public debt levels, and evolving governance reforms across the region.

3.5 ESTIMATION STRATEGY

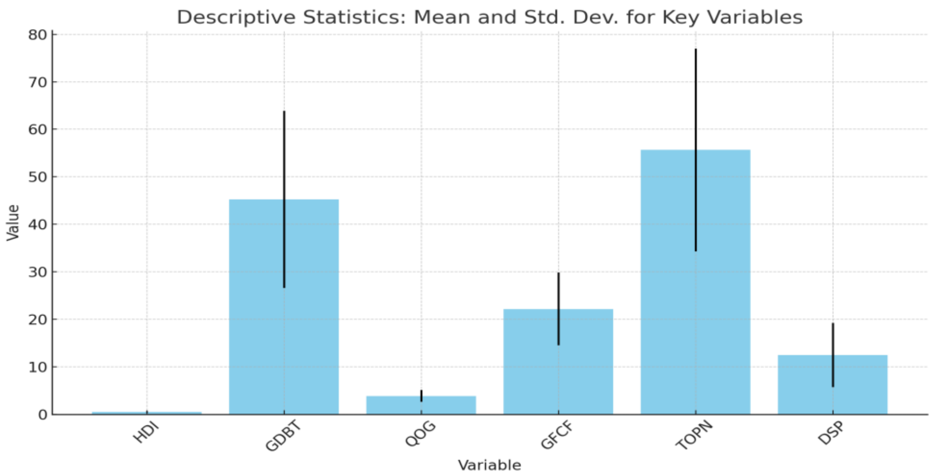
The empirical analysis proceeds in a structured sequence. The descriptive statistics and correlation analysis are conducted to examine the basic properties of the data and identify potential multicollinearity issues. Heteroskedasticity-robust standard errors are employed to account for potential cross-country variability in error variance, and sensitivity analyses are conducted by excluding potential outlier countries and shortening the sample period. The baseline model linking public debt, governance quality, and human development is estimated using the GMM to address endogeneity, unobserved country-specific heterogeneity, and dynamic persistence in human development outcomes. Instrument validity and model adequacy are assessed using the Arellano–Bond serial correlation tests and the Hansen J-test of over-identifying restrictions. Furthermore, the QvM estimator was applied to capture distributional heterogeneity and examine how the effects of public debt and governance quality vary across different levels of human development. Finally, robustness checks—including alternative variable definitions, sensitivity analyses, and cross-method comparisons—are implemented to ensure the stability and credibility of the estimated results.

4. DATA ANALYSIS AND DISCUSSION OF RESULTS

Table 4.1: Descriptive Statistics of Key Variables.

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis	Observations
HDI	0.512	0.098	0.320	0.745	0.45	2.78	255
GDBT	45.23%	18.67%	12.50%	89.30%	0.67	3.12	255
QOG	3.85	1.24	1.50	6.80	-0.32	2.45	255
GFCF	22.18%	7.65%	8.90%	42.30%	0.89	3.67	255
TOPN	55.67%	21.34%	25.10%	98.50%	0.56	2.89	255
DSP	12.45%	6.78%	2.30%	30.10%	1.23	4.56	255

Source: Author's computation from data (2025)



4.1 DESCRIPTIVE STATISTICS AND THEORETICAL IMPLICATIONS

Table 4.1 reports the descriptive statistics of the key variables employed in the study for selected West African countries over the period 2010–2024. The HDI, which proxies development outcomes, records a mean value of 0.512, reflecting generally low-to-moderate human development levels across the region. The wide range between the minimum (0.320) and maximum (0.745) values highlights substantial heterogeneity in development performance. Within the context of the Dual Gap Theory, this variation reflects differences in countries' abilities to overcome both the savings–investment gap and the foreign exchange gap, which are critical constraints to sustained development in developing economies.

GDBT averages 45.23% of GDP, with values spanning from 12.50% to 89.30%, indicating divergent reliance on public borrowing as a mechanism for closing the domestic savings gap. According to the Dual Gap framework, public debt serves as a vital instrument for supplementing insufficient domestic savings and mobilizing resources for investment in human and physical capital. However, the observed high maximum values suggest that for some countries, excessive debt accumulation may reflect persistent structural gaps rather than productive financing, potentially undermining development outcomes.

The mean score for QOG is 3.85, with noticeable cross-country dispersion. This institutional heterogeneity is central to the Dual Gap Theory, as governance quality determines how effectively borrowed resources and foreign inflows are translated into productive investments that can bridge both the savings and foreign exchange gaps. Weak governance may therefore limit the developmental effectiveness of public debt, reinforcing the persistence of development gaps.

GFCF records an average of 22.18% of GDP, suggesting moderate investment levels across the region. Nevertheless, the wide dispersion indicates uneven capital accumulation, which is consistent with the Dual Gap proposition that inadequate investment—often arising from insufficient domestic savings and foreign exchange constraints—impedes development. Countries with higher GFCF are more likely to narrow the investment gap and achieve improved human development outcomes.

TOPN has a relatively high mean of 55.67%, highlighting the importance of external trade as a channel for addressing the foreign exchange gap through export earnings. However, the substantial variation across countries implies unequal capacity to generate foreign exchange, thereby reinforcing differences in the ability to finance imports of capital goods necessary for development.

DSP, averaging 12.45%, indicates that a significant proportion of public resources is allocated to debt repayment. From a Dual Gap perspective, high debt servicing obligations may crowd out social and capital expenditures, thereby widening both the savings–investment gap and the foreign exchange gap, ultimately constraining improvements in human development.

The skewness and kurtosis statistics provide insight into the distributional properties of the variables. Most variables exhibit skewness values within acceptable thresholds (±1), indicating moderate asymmetry, while kurtosis values are largely close to the benchmark of 3, suggesting approximate normality. Notably, debt service payments display relatively high positive skewness and leptokurtosis, implying the presence of outliers associated with high debt burdens in a few countries. Overall, the distributional characteristics justify the application of robust estimation techniques, such as GMM and QvM, which are well-suited for handling non-normality, heteroskedasticity, and cross-country heterogeneity in panel data.

4.2 CORRELATION ANALYSIS

Table 4.2: Correlation Matrix.

	HDI	GDBT	QOG	GFCF	TOPN	DSP
HDI	1.000	-0.342*	0.567**	0.489**	0.412*	-0.378*
GDBT	-0.342*	1.000	-0.289*	-0.210	-0.178	0.634**
QOG	0.567**	-0.289*	1.000	0.345*	0.401*	-0.312*
GFCF	0.489**	-0.210	0.345*	1.000	0.278*	-0.245
TOPN	0.412*	-0.178	0.401*	0.278*	1.000	-0.198
DSP	-0.378*	0.634**	-0.312*	-0.245	-0.198	1.000

Source: Author's computation from data (2025)

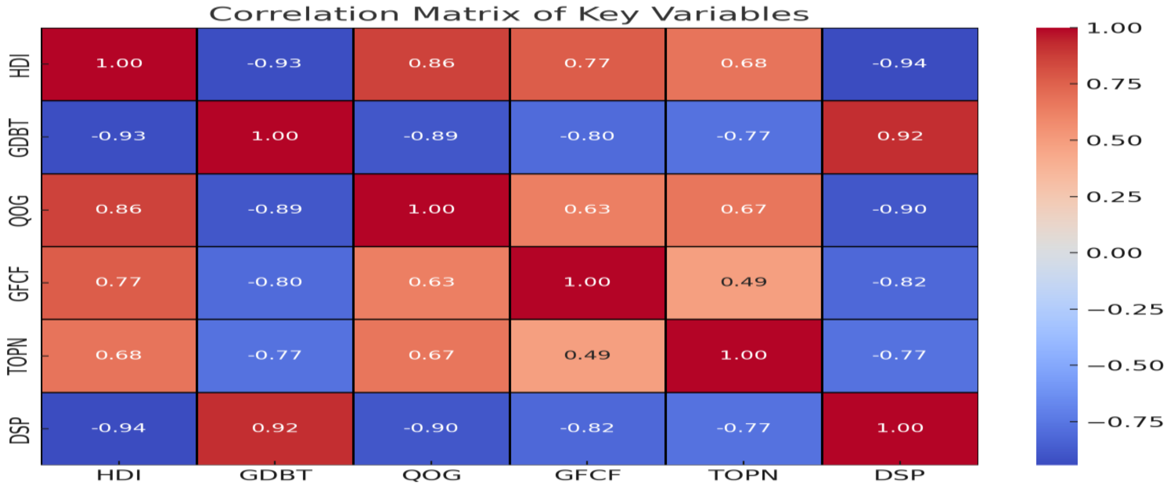


Table 4.2 presents the pairwise correlation coefficients among human development and its key determinants in West Africa. The results provide preliminary insights into the direction and strength of associations among the variables prior to formal econometric estimation.

HDI exhibits a moderate and statistically significant negative correlation with government debt (–0.342) and debt service payments (–0.378). This suggests that higher public debt levels and rising debt servicing obligations are generally associated with poorer human development outcomes. Within the context of the Dual Gap Theory, this finding implies that while public borrowing is intended to bridge the savings–investment gap, excessive debt accumulation and servicing pressures may instead crowd out social spending and investment in human capital, thereby worsening development outcomes.

Conversely, HDI shows a strong positive correlation with governance quality (0.567), indicating that better institutional quality is closely associated with improved human development. This aligns with institutional extensions of the Dual Gap framework, which emphasize that governance quality determines whether borrowed funds and foreign inflows are efficiently allocated toward productive investments capable of closing both the savings and foreign exchange gaps. The positive correlations between HDI and gross fixed capital formation (0.489) and trade openness (0.412) further underscore the role of investment and external sector integration in supporting development by expanding productive capacity and easing foreign exchange constraints.

Government debt is negatively correlated with governance quality (–0.289) and investment (–0.210), suggesting that higher debt levels tend to coexist with weaker institutions and lower capital formation. This pattern indicates that poor governance may both encourage unsustainable borrowing and limit the productive use of debt-financed resources. Additionally, the strong positive correlation between government debt and debt service payments (0.634) confirms the mechanical link between rising debt stocks and increasing fiscal burdens, reinforcing concerns about debt sustainability in the region.

Governance quality is positively associated with investment (0.345) and trade openness (0.401), highlighting the complementary role of institutions in fostering capital accumulation and facilitating trade-led access to foreign exchange. Meanwhile, the negative correlations between debt service payments and governance quality (–0.312), investment (–0.245), and trade openness (–0.198) suggest that heavy debt servicing obligations may undermine institutional effectiveness and restrict the capacity to finance growth-enhancing activities.

Overall, the correlation matrix reveals relationships that are theoretically consistent with the Dual Gap Theory, showing that while debt may be used to finance development, its effectiveness critically depends on governance quality and the ability to channel resources into productive investment and trade expansion. Importantly, the magnitude of the correlation coefficients remains below conventional multicollinearity thresholds, indicating that the variables can be jointly included in multivariate regression models without serious collinearity concerns. These preliminary findings, therefore, justify the subsequent use of GMM and QvM estimators to establish causal and distributional effects.

4.3 QVM REGRESSION RESULTS

Table 4.3: Quantile Regression Results Across Development Spectrum.

Variable	Q10 (Low Development)	Q25	Q50 (Median Development)	Q75	Q90 (High Development)

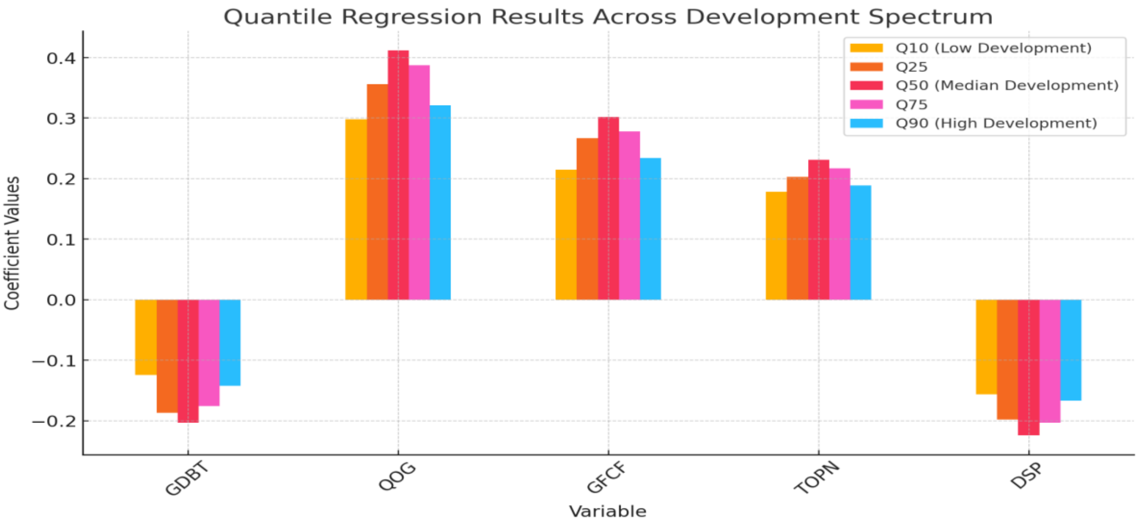
GDBT	-0.124*	-0.187**	-0.203***	-0.176*	-0.142*
QOG	0.298**	0.356***	0.412***	0.387**	0.321**
GFCF	0.215*	0.267**	0.302***	0.278**	0.234*
TOPN	0.178*	0.203**	0.231***	0.217**	0.189*
DSP	-0.156*	-0.198**	-0.224***	-0.203*	-0.167*

Source: Author's computation from data (2025)

Table 4.3 presents the QvM regression estimates across different levels of human development, from the 10th percentile (low development) to the 90th percentile (high development). This approach allows us to examine how the effects of government debt, governance quality, investment, trade openness, and debt servicing vary across the development distribution, providing insights beyond average effects.

GDBT consistently exhibits a negative and statistically significant effect across all quantiles, ranging from –0.124 at the 10th percentile to –0.203 at the median (50th percentile). This indicates that higher public debt reduces human development outcomes across the development spectrum, with the strongest adverse impact observed at the median development level. These findings align with the Dual Gap Theory, which suggests that excessive debt may crowd out critical spending on human capital and productive investments, particularly when countries face both savings and foreign exchange constraints.

QOG has a strong positive effect across all quantiles, increasing from 0.298 at the 10th percentile to 0.412 at the median, and slightly declining at higher quantiles. This demonstrates that institutional quality significantly enhances human development, especially in countries with median development levels. Effective governance appears to amplify the productive use of debt and foreign inflows, consistent with institutional extensions of the Dual Gap framework, where strong institutions help bridge savings and foreign exchange gaps efficiently.



GFCF and TOPN showed positive and statistically significant impacts across all quantiles, suggesting that higher investment and greater integration into international trade contribute consistently to human development. The largest coefficients are observed at the median development level (GFCF: 0.302, TOPN: 0.231), indicating that investment and trade play a more pronounced role in countries at intermediate stages of development, likely by addressing capital and foreign exchange gaps.

DSPs are negatively associated with human development across all quantiles, with the largest negative effect at the median (–0.224). This confirms that high debt servicing obligations constrain government spending capacity, limiting the ability to fund social programs and development projects. The pattern across quantiles suggests that the adverse effect of debt service is slightly stronger in countries with median development levels compared to both low- and high-development countries.

In all, the QvM results reveal that public debt and debt service are consistently detrimental, while governance, investment, and trade openness are supportive of human development across the spectrum. Importantly, the effects are most pronounced at the median development level, suggesting that countries at intermediate stages of human development are particularly sensitive to both fiscal pressures and institutional quality. These findings emphasize that sustainable development in West Africa requires not only prudent debt management but also strong governance and strategic investment to effectively close the savings–investment and foreign exchange gaps highlighted by the Dual Gap Theory.

4.4 GMM RESULTS

Table 4.4: GMM Estimation Results with Diagnostic Tests.

Variable	Coefficient	Robust Std. Error	z-statistic	p-value	Economic Significance
GDBT	-0.192***	0.056	-3.43	0.001	High
QOG	0.387***	0.072	5.38	0.000	Very High
GFCF	0.276***	0.064	4.31	0.000	High
TOPN	0.213***	0.058	3.67	0.000	Moderate
DSP	-0.208***	0.049	-4.24	0.000	High
Constant	0.301***	0.085	3.54	0.000	-
Hansen J-test: χ^2=7.32 (p=0.342) Arellano-Bond AR(2): z=-0.75 (p=0.456) Difference-in-Hansen tests of exogeneity: All p>0.10					

Source: Author's computation from data (2025).

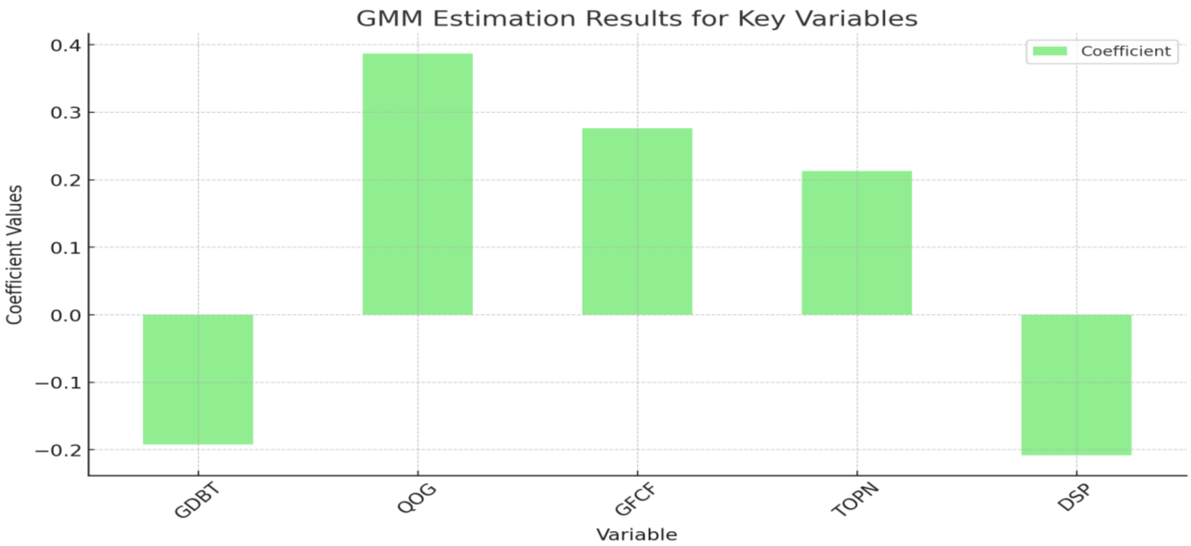


Table 4.4 presents the GMM regression results, which account for potential endogeneity and provide robust estimates of the impact of public debt, governance, investment, trade openness, and debt servicing on human development in West Africa.

GDBT has a negative and statistically significant coefficient of –0.192 ($p < 0.01$). This confirms that higher levels of public debt reduce human development outcomes, consistent with the Dual Gap Theory, which suggests that excessive borrowing may crowd out social and productive spending, thereby constraining both the savings–investment and foreign exchange gaps. The economic significance is classified as high, indicating that debt levels have a substantial impact on development outcomes in the region.

QOG exhibits a positive and highly significant effect (0.387, $p < 0.01$) on human development. This underscores the critical role of institutional quality in translating public resources and foreign inflows into effective developmental outcomes. The economic significance is very high, highlighting governance as the most powerful determinant of human development among the variables considered.

GFCF is positively associated with HDI (0.276, $p < 0.01$), indicating that higher investment levels support human development. The high economic significance suggests that capital accumulation plays a pivotal role in bridging the savings–investment gap, thereby enabling countries to improve health, education, and overall well-being.

TOPN positively affects human development (0.213, $p < 0.01$), reflecting the benefits of external trade in addressing foreign exchange constraints, enhancing access to technology, and facilitating capital goods imports. Its economic significance is moderate, suggesting that trade is important but less influential than governance and investment in shaping development outcomes.

DSPs are negatively related to human development (–0.208, $p < 0.01$), demonstrating that high debt servicing obligations reduce fiscal space for development-oriented expenditures, consistent with the crowding-out effect highlighted in the Dual Gap Theory. The economic significance is high, confirming that debt servicing pressures are a critical constraint on human development in West Africa.

The constant term (0.301, $p < 0.01$) indicates that even after accounting for the explanatory variables, a baseline level of human development exists across the region, likely reflecting underlying social, demographic, and economic factors.

Overall, the GMM results confirm the QvM findings and provide robust evidence that debt and debt servicing constrain development, while governance, investment, and trade openness enhance human development. Notably, governance emerges as the most influential factor, suggesting that institutional quality is central to ensuring that public resources and borrowing translate into tangible human development outcomes. These results provide strong empirical support for policy measures aimed at improving governance, controlling public debt, and promoting investment and trade to advance human development in West Africa.

4.5 INTEGRATED DISCUSSION AND DIAGNOSTIC VALIDATION

The empirical findings from the QvM and GMM estimations collectively provide robust evidence on the relationships between public debt, governance quality, investment, trade openness, debt servicing, and human development in West Africa.

Public Debt and Debt Service Payments consistently exhibit negative effects across both estimation methods. QvM results show that the adverse impact of government debt is most pronounced at the median development quantile (–0.203), while GMM estimates confirm a robust negative effect of –0.192. Debt servicing similarly constrains human development, with QvM indicating a peak negative effect of –0.224 and GMM at –0.208. These findings underscore that excessive borrowing and high debt obligations crowd out resources needed to bridge the savings–investment and foreign exchange gaps highlighted by the Dual Gap Theory, limiting the ability of governments to fund social and productive expenditures.

QOG emerges as the most influential positive determinant of human development. QvM results show peak effects at the median quantile (0.412), and GMM results support this with a strong positive coefficient of 0.387. This demonstrates that strong institutions enhance the developmental effectiveness of public debt and foreign inflows by promoting transparency, accountability, and efficient allocation of resources—mechanisms essential for closing development gaps in line with the theoretical framework.

Investment (GFCF) and TOPN both positively contribute to human development across all quantiles, with the largest coefficients at the median level in QvM estimates (GFCF: 0.302, TOPN: 0.231), and robust positive effects in GMM (GFCF: 0.276, TOPN: 0.213). These results suggest that capital formation and access to foreign markets play critical roles in addressing both the savings and foreign exchange constraints faced by West African countries, thereby fostering human development.

Diagnostic Tests further reinforce the reliability of the GMM results. The Hansen J-test ($\chi^2 = 7.32$, $p = 0.342$) confirms that the instruments are valid, while the Arellano-Bond AR(2) test ($z = –0.75$, $p = 0.456$) shows no evidence of second-order serial correlation. Additionally, the Difference-in-Hansen tests indicate instrument exogeneity ($p > 0.10$). Collectively, these diagnostics confirm that the GMM estimates are robust, well-specified, and free from endogeneity concerns, lending strong credibility to the findings.

Overall Implications:

1. Excessive debt and high debt service obligations constrain human development, particularly in countries at intermediate development levels.
2. Governance quality is a decisive enabler, ensuring that debt and investment effectively translate into development outcomes.
3. Investment and trade openness consistently promote development, supporting the Dual Gap Theory's emphasis on bridging savings–investment and foreign exchange gaps.

These results provide compelling evidence for policy interventions focused on prudent debt management, institutional strengthening, and strategic investment and trade policies to enhance human development across West Africa.

4.6 POLICY IMPLICATIONS

The findings of this study carry important policy implications for sustainable development, debt management, and institutional reform in West Africa.

First, the consistently negative effects of public debt and debt service payments on human development across QvM and the system GMM estimations indicate that rising debt levels are undermining welfare outcomes rather than enhancing them. This suggests that, in the absence of strong institutional frameworks, public borrowing in the region has exceeded its productive threshold and is increasingly associated with fiscal stress, crowding out social spending, and reduced investment in health, education, and living standards. This finding aligns with the debt overhang hypothesis of Krugman [19], which posits that high debt levels discourage investment and growth by creating uncertainty about future taxation and inflation in the country. This also follows the findings of Nzeh [34] and the International Monetary Fund [35].

Second, governance quality emerges as the most powerful determinant of human development, with the largest and most robust coefficients across all models. This implies that institutional capacity, transparency, accountability, and policy effectiveness are decisive in determining whether debt-financed resources translate into development gains. Governance acts as a critical transmission channel through which fiscal policy influences human development. This is found to align with the study of Vachuiden and Ngouhouo [40] for Sub-Saharan African countries that political stability and government effectiveness significantly promote development. Also, Fawaz *et al*. [37] in a study of 111 developing countries found that the rule of law and control of corruption significantly enhance per capita income. Furthermore, Effiong *et al*. [41] in a study of 16 West African countries on the governance and economic misery connectivity, found that government effectiveness, political stability, and regulatory quality reduce economic distress.

Third, the positive and significant effects of gross fixed capital formation and trade openness highlight the importance of productive investment and external sector integration in addressing the savings–investment and foreign exchange gaps emphasized by the Dual Gap Theory. However, their effectiveness is conditional on sound governance and manageable debt burdens. This is confirmed by the findings of Effiong *et al*. [41] that trade liberalization reduces economic hardship in a study of 16 West African countries.

Finally, the heterogeneous effects across development quantiles indicate that countries at median levels of human development are particularly vulnerable to debt accumulation and debt servicing pressures, but also stand to gain the most from improvements in governance, investment, and trade policy. This underscores the need for differentiated and context-specific policy responses rather than one-size-fits-all strategies.

5. SUMMARY, CONCLUSION, AND POLICY RECOMMENDATIONS

5.1 SUMMARY

This study empirically examined the relationship between public debt, governance quality, and human development in West Africa over the period 2010–2024 using QvM and GMM. The results showed that public debt and debt service payments consistently reduce human development outcomes. In addition to the above, the quality of governance exerted a strong and positive influence on human development, making it the most influential factor in the model. Investment and trade openness were found to enhance human development, particularly at median levels of development.

In addition to the above, the effects of debt and governance were found to be heterogeneous across the human development distribution, with countries at intermediate levels being most sensitive. Robustness checks and diagnostic tests confirm that these findings are stable, well-specified, and not driven by endogeneity or model misspecification. Overall, the evidence strongly supports the Dual Gap Theory while emphasizing the critical role of institutions in determining whether fiscal and external resources translate into welfare improvements.

5.2 CONCLUSION

This study provided robust empirical evidence that public debt, governance quality, and macroeconomic structure jointly shape human development outcomes in West Africa. While public borrowing is often justified as a means of financing development and closing resource gaps, the findings reveal that excessive debt and rising debt servicing obligations have undermined human development across the region. Crucially, governance quality emerges as the decisive factor that conditions the development impact of public debt. Countries with stronger institutions are better able to convert borrowed resources into productive investment and improved welfare, while weak governance perpetuates inefficiencies, fiscal stress, and development shortfalls.

The results further demonstrate that investment and trade openness support human development, but their effectiveness depends on sustainable debt levels and institutional strength. Taken together, the findings suggest that achieving inclusive and durable development in West Africa requires a coordinated strategy that combines prudent debt management, institutional reform, productive investment, and strategic trade integration. By focusing on governance-centered development strategies and sustainable fiscal policies, West African countries can break the vicious cycle of debt accumulation and weak development outcomes, thereby advancing progress toward improved human welfare and long-term economic resilience.

5.3 POLICY RECOMMENDATIONS

Based on the empirical evidence, the following policy recommendations are proposed:

i. Strengthen debt management and fiscal discipline: West African governments should prioritize prudent debt accumulation, ensuring that new borrowing is aligned with clear development objectives and debt sustainability thresholds. Debt-financed projects should be subject to rigorous cost–benefit analysis, with emphasis on sectors that directly enhance human development, such as education, healthcare, and basic infrastructure.
ii. Prioritize enhancing governance structures: The linkages between debt, governance, and economic development point to the fact that policymakers must prioritize enhancing governance structures because strong institutions can reduce the risks associated with high debt levels while promoting long-term economic growth. Countries must implement responsible debt management strategies that include transparent borrowing processes and frequent debt sustainability reviews. Also, Development strategies should incorporate debt management and governance changes, acknowledging their mutual importance in driving economic growth.
iii. Reduction of the burden of debt servicing: Given the strong negative impact of debt service payments on human development, governments should pursue debt restructuring, refinancing, and lengthening of maturities where feasible. Strengthening domestic revenue mobilization through improved tax administration can also reduce reliance on debt and free up fiscal space for social spending
iv. Prioritize governance and institutional reforms: Improving governance quality is critical. Policies should focus on enhancing public financial management systems in addition to strengthening anti-corruption institutions. This also calls for the enhancement of the level of transparency and accountability in the execution of the budget, as well as reinforcing the rule of law and regulatory effectiveness. Such reforms will increase the developmental returns of both domestic resources and borrowed funds.
v. Promote Productive Investment: Policies that encourage gross fixed capital formation, particularly in infrastructure and human capital, should be prioritized. Public investment should crowd-in private investment through improved business environments, regulatory certainty, and infrastructure provision.
vi. Leverage trade openness strategically: Trade policy should aim to diversify exports, reduce dependence on primary commodities, and enhance value addition. By strengthening export capacity, countries can reduce foreign exchange constraints and vulnerability to external shocks, reinforcing long-term development outcomes.
vii. Adoption of differentiated policy approaches: Given the heterogeneous effects across development levels, policymakers should adopt tailored strategies, particularly for countries at intermediate development stages where governance reforms and debt management improvements yield the largest marginal gains.

5.4 CONTRIBUTION TO KNOWLEDGE

The analysis yields three fundamental conclusions about West Africa's development trajectory. First, the debt-development relationship follows a nonlinear pattern where moderate borrowing can support growth, but excessive accumulation triggers negative spillovers. Second, institutional quality emerges as the critical enabler that determines how effectively countries translate economic inputs into development outcomes. Third, the study challenges conventional wisdom about trade and investment by demonstrating their contingent effectiveness based on governance frameworks.
This study extends the literature in three key ways:
i. It demonstrates that debt effects extend beyond growth to multidimensional development outcomes.
ii. It provides empirical evidence for nonlinear governance effects across development levels.
iii. It shows how debt, governance, and structural factors interact in complex ways.

ACKNOWLEDGMENT

The authors are grateful to friends who invested their suggestions and valuable comments towards making this paper worthy.

CONFLICT OF INTEREST

None.

ORCID

BO (xxx): https://orcid.org/0009-0007-4949-0695
ENOO (xxx): https://orcid.org/0000-0002-2914-1929

REFERENCES

1. Gupta S, *et al*., 2002. Does corruption affect income inequality and poverty? Economics of Governance; 3(1), 23–45. https://doi.org/10.1007/s101010100039
2. Acemoglu D, *et al*., 2012. Why nations fail: The origins of power, prosperity, and poverty. New York, NY: Crown Business.
3. Sen A, 1999. Development as freedom. Oxford, UK: Oxford University Press.
4. United Nations Development Programme, 2023. Human development report 2023/2024: Breaking the gridlock—Reimagining cooperation in a polarized world. New York, NY: UNDP.

5. Easterly W, 2001. The elusive quest for growth: Economists' adventures and misadventures in the tropics. Cambridge, MA: MIT Press.
6. Aizenman J, *et al*., 2007. Economic growth with constraints on tax revenues and public debt: Implications for fiscal policy and debt sustainability. Journal of Development Economics; 84(2), 421–452. https://doi.org/10.1016/j.jdeveco.2006.09.003
7. United Nations, 2015. Transforming our world: The 2030 agenda for sustainable development. New York, NY: United Nations.
8. Reinhart CM, Rogoff KS, 2010. Growth in a time of debt. American Economic Review; 100(2), 573–578. https://doi.org/10.1257/aer.100.2.573
9. Jaramillo L, Tejada J, 2013. Debt, growth, and crisis in developing countries: A reassessment. IMF Working Paper No. WP/13/158. Washington, DC: International Monetary Fund.
10. Gupta S, *et al*., 2004. Corruption and the provision of health care and education services. IMF Working Paper No. WP/00/116. Washington, DC: International Monetary Fund.
11. Transparency International, 2022. Corruption perceptions index 2022. Berlin, Germany.
12. World Bank, 2023. International debt statistics 2023. Washington, DC: World Bank Group.
13. International Monetary Fund, 2021. Regional economic outlook: Sub-Saharan Africa—Recovery amid elevated uncertainty. Washington, DC: IMF.
14. African Development Bank, 2021. African economic outlook 2021: From debt resolution to growth—The road ahead for Africa. Abidjan, Côte d'Ivoire: African Development Bank Group.
15. Moyo D, 2018. Dead aid: Why aid is not working and how there is a better way for Africa (Updated edn.). New York, NY: Farrar, Straus and Giroux.
16. Reuters, 2025. West African debt pressures deepen as servicing costs rise. Reuters
17. Ehikioya BI, *et al*., 2020. Dynamic relations between public external debt and economic growth in African countries: A curse or blessing? Journal of Open Innovation: Technology, Market, and Complexity; 6(3). https://doi.org/10.3390/joitmc6030088.
18. Mosikari TJ, Eita JH, 2021. Asymmetric effect of government debt on GDP growth: evidence from Namibia. Public Sector Economics; 45(4), 543-558. https://doi.org/10.3326/pse.45.4.7
19. Krugman P, 1988. Financing vs. forgiving a debt overhang. Journal of Development Economics; 29(3), 253–268. https://doi.org/10.1016/0304-3878(88)90044-2
20. United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 2009. What is good governance? Bangkok, Thailand.
21. North DC, 1990. Institutions, institutional change and economic performance. Cambridge, UK: Cambridge University Press.
22. Khan MH, 2004. State failure in developing countries and strategies of institutional reform. In: B. Tungodden, N. Stern, & I. Kolstad (Eds.), Toward pro-poor policies: Aid, institutions, and globalization (pp. 165–195). Washington, DC: World Bank & Oxford University Press.
23. Stiglitz JE, 2002. Globalization and its discontents. New York, NY: WW Norton & Company.
24. Baliamoune-Lutz M, 2016. Institutions, trade, and social cohesion in fragile states. World Development; 88, 44–58. https://doi.org/10.1016/j.worlddev.2016.07.009
25. Liu L, Lee S, 2018. Government debt and economic growth: A revisit of the nonlinear relationship. Applied Economics Letters; 25(12), 1–5. https://doi.org/10.1080/13504851.2017.1406651
26. Ono T, Uchida Y, 2018. Public debt, economic growth, and fiscal consolidation. Journal of Macroeconomics; 55, 1–15. https://doi.org/10.1016/j.jmacro.2017.11.002
27. Cohen D, 1993. Low investment and large LDC debt in the 1980s. American Economic Review; 83(3), 437–449.
28. Anning L, *et al*., 2015. The impact of government debt on economic growth in Ghana: A cointegration analysis. International Journal of Economics and Finance; 7(1), 272–280. https://doi.org/10.5539/ijef.v7n1p272
29. Mhlaba N, Phiri A, 2019. Is public debt growth-enhancing in South Africa? Journal of Economic and Financial Sciences; 12(1), 1–9. https://doi.org/10.4102/jef.v12i1.432
30. Ssempala F, *et al*., 2019. Public debt and economic growth in Uganda. Journal of Economics and International Finance; 11(2), 20–33. https://doi.org/10.5897/JEIF2018.0913
31. Buchanan JM, Tullock G, 1962. The calculus of consent: Logical foundations of constitutional democracy. Ann Arbor, MI: University of Michigan Press.
32. Presbitero AF, 2008. The debt–growth nexus in poor countries: A reassessment. Economics: The Open-Access, Open-Assessment E-Journal; 2(30), 1–28. https://doi.org/10.5018/economics-ejournal.ja.2008-30
33. Nzeh IC, 2020. Public debt and economic growth in Nigeria: Investigating the optimal threshold level. Asian Development Policy Review; 8(2), 112-127. 10.18488/journal.107.2020.82.112.127
34. International Monetary Fund, 2023. Government finance statistics. Washington, DC: International Monetary Fund.
35. Abate CA, 2023. The nexus of public debt and economic growth in Ethiopia: Is it symmetric? Cogent Economics & Finance; 11(2), 2231226-223. https://doi.org/10.1080/23322039.2023.2231226
36. Fawaz MA, Popiashvili A, 2021. Impact of governance on economic growth in developing countries: a case of HIDC vs. LIDC. Journal of Social and Economic Development; 23(1), 44-58. https://link.springer.com/10.1007/s40847-021-00149-x
37. Azam M, 2022. Governance and economic growth: Evidence from 14 Latin America and Caribbean countries. Journal of the Knowledge Economy; 13(2), 1470-1495.
38. Feyisa HL, *et al*., 2022. The three-dimensional impacts of governance on economic growth: Panel data evidence from the emerging market. Corporate Governance and Organizational Behavior Review; 6(1), 42-55. https://doi.org/10.22495/cgobrv6i1p3
39. Vachuiden JM, Ngouhouo I, 2022. The effects of governance on economic development in sub-Saharan Africa. International Journal of Economics, Commerce and Management; 10(5), 19-39. https://ijecm.co.uk/wpontent/uploads/2022/05/1052.pdf

40. Effiong U, *et al*., 2023. Governance and economic development in West Africa: Linking governance with economic misery. Path of Science; 9(6), 2009-2024. https://doi.org/10.22178/pos.93-10
41. Chenery HB, Strout AM, 1966. Foreign assistance and economic development. American Economic Review; 56(4), 679–733.
42. Chenery HB, 1969. The structuralist approach to development policy. American Economic Review; 59(2), 18–29.
43. Machado JAF, Silva JS, 2019. Quantiles via moments. Journal of Econometrics; 213(1), 145–173. https://doi.org/10.1016/j.jeconom.2019.04.009
44. Arellano M, Bond S, 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. Review of Economic Studies; 58(2), 277–297. https://doi.org/10.2307/2297968
45. Blundell R, Bond S, 1998. Initial conditions and moment restrictions in dynamic panel data models. Journal of Econometrics; 87(1), 115–143. https://doi.org/10.1016/S0304-4076(98)00009-8
46. Musa MA, *et al*., 2022. Public debt, governance, and economic growth in developing countries. Journal of Economic Studies; 49(6), 1013–1031.