



Journal of Econ-Islamic Law and Society Research

E-ISSN: XXXX-XXXX

Vol.1, No.1, 2025, pp. 47-60

DOI: <https://doi.org/10.61455/jeisr.v1i01.426>

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## Public Debt, Governance, and Economic Growth in Emerging Economies: A Comparative Analysis

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Received February 14, 2025; Revised March 28, 2025; Accepted May 29, 2025

### Abstract

**Objective:** This study examines the relationship between public debt and economic growth in emerging economies, emphasizing how debt management and governance influence fiscal performance and development outcomes. The paper aims to identify the conditions under which debt supports or constrains economic growth. **Theoretical framework:** The research is guided by the debt overhang theory and Keynesian economics. Debt overhang suggests that excessive debt discourages private investment, while Keynesian theory highlights that debt-financed spending can stimulate growth when allocated productively. **Literature review:** Previous studies provide mixed results. Some show that moderate debt enhances growth by financing infrastructure, whereas others argue that high debt levels reduce fiscal space and crowd out investment. Many studies identify threshold effects, often finding that growth slows when debt exceeds 60–90% of GDP. This study builds on existing literature by integrating governance and debt composition into the analysis of the debt–growth nexus. **Methods:** A quantitative and comparative cross-country design was employed using secondary data from the World Bank and IMF for the period 2000–2023. Descriptive statistics and panel regression models were applied to examine the relationship between debt-to-GDP ratios and GDP per capita growth, while case contrasts provided contextual insights. **Results:** The findings reveal that moderate and well-managed debt typically below 75–80% of GDP contributes positively to growth, while excessive and poorly managed debt slows economic performance. Countries such as Rwanda and Indonesia benefited from effective debt management, while Zambia and Argentina experienced weaker growth outcomes due to unsustainable borrowing. **Implications:** The study highlights the importance of maintaining debt sustainability, improving governance, and prioritizing productive investments. Policymakers should ensure transparency, strengthen fiscal institutions, and balance external borrowing with domestic resource mobilization. **Novelty:** The study’s originality lies in its comparative analysis of emerging economies, integrating governance quality and debt composition into the debt–growth framework. It contributes to policy debates by showing that debt outcomes depend not only on size but also on how effectively it is managed within institutional contexts.

**Keywords:** public debt, economic growth, emerging economies, debt sustainability, governance.

## INTRODUCTION

Public debt remains a central issue for emerging economies striving to achieve sustainable growth while maintaining fiscal stability [1]. Governments often rely on borrowing to finance critical sectors such as infrastructure, education, and health, with the expectation of accelerating long-term development [2]. However, excessive borrowing can threaten macroeconomic stability, increase debt servicing burdens, and crowd out private investment [3]. This dual effect makes public debt both an enabler and a potential constraint to economic growth.

Emerging economies face distinct challenges in managing debt compared to advanced nations [4]. Limited domestic capital markets, dependence on external borrowing, and exposure to global financial shocks make debt management more complex and riskier [5]. Furthermore, weak fiscal institutions and governance challenges can lead to inefficiencies and misuse of borrowed funds, intensifying debt vulnerabilities [6]. These factors underscore the importance of effective governance in ensuring that public debt translates into sustainable economic growth rather than financial distress.

Theoretically, the relationship between debt and growth is shaped by two major perspectives. The Keynesian view argues that borrowing stimulates demand and production when used for productive investment, particularly in underutilized economies [7]. In contrast, debt overhang theory warns that high debt levels discourage investment because of expectations of future taxation or default risk [8]. The balance between these opposing effects depends on how governments utilize debt, the quality of institutions, and fiscal discipline [9].

Empirical studies on public debt in emerging economies have produced mixed findings [10]. While moderate debt can enhance growth by financing infrastructure and human capital development, high and poorly managed debt often reduces fiscal space and hampers long-term development [11]. Recent evidence highlights that governance and institutional quality significantly mediate the debt growth relationship, yet many studies overlook this factor when analyzing emerging economies [12].

Despite extensive research on public debt and growth, a clear gap remains in understanding how governance interacts with debt management to influence growth outcomes across emerging economies [13]. Existing studies often treat countries as homogeneous or focus solely on debt size without accounting for qualitative factors such as institutional capacity, fiscal transparency, and policy consistency [14].

Therefore, this study aims to examine the comparative relationship between public debt, governance, and economic growth in emerging economies during 2000–2023. It contributes to the literature by highlighting how governance quality and debt composition condition the debt–growth nexus, offering policy-relevant insights for debt sustainability and development strategies.

## LITERATURE REVIEW

The relationship between public debt and economic growth has long been debated in economic research. Two main theories explain this linkage: Keynesian theory and debt overhang theory. Keynesian theory posits that government borrowing can stimulate economic activity by financing productive investments and boosting aggregate demand, particularly during economic slowdowns [15]. Conversely, the debt overhang theory argues that when public debt exceeds sustainable levels, investors anticipate higher future taxes or default risks, which discourages private investment and slows growth [16].

While these theories provide a foundation, empirical evidence shows that the debt–growth relationship varies significantly across regions and institutional contexts. In Asian

economies, studies reveal that moderate external borrowing has supported long-term growth when funds are directed toward productive sectors [17]. For instance, research on Indonesia and Malaysia found that prudent fiscal management and strong governance allowed these countries to maintain stable growth despite periods of rising debt [18]. Similarly, in East Asia, external borrowing contributed to industrial transformation and infrastructure expansion when accompanied by effective debt management frameworks [19].

In contrast, evidence from African economies often shows weaker outcomes due to governance challenges and dependence on external commercial loans [20]. Studies on Rwanda and Ethiopia highlight that debt relief and improved governance structures enabled sustainable growth by channeling borrowing toward infrastructure and human capital development [21]. However, countries such as Zambia and Ghana faced debt distress after heavy reliance on Eurobonds and weak fiscal oversight [22]. These findings underscore that debt composition, institutional quality, and fiscal transparency determine whether borrowing promotes or hinders growth [23].

Recent comparative research emphasizes the importance of governance and institutional quality in mediating debt outcomes [24]. Countries with transparent debt management, strong anti-corruption frameworks, and credible fiscal policies tend to convert borrowing into growth-enhancing investments [25]. Conversely, where governance is weak, debt often fuels inefficiency, corruption, and recurrent crises [26].

Despite the rich literature, gaps remain. Many studies either focus on single-country analyses or examine the debt-growth nexus without accounting for the role of governance and debt structure [27]. Few have conducted cross-regional comparisons between African and Asian emerging economies using both quantitative and descriptive approaches.

Therefore, this study builds on existing research by integrating governance indicators into the analysis of public debt and economic growth across selected emerging economies in Africa and Asia. By combining econometric evidence with comparative case analysis, the study aims to fill the gap in understanding how institutional quality and fiscal management shape the debt-growth relationship in different regional contexts.

## METHODOLOGY

This study adopts a quantitative and comparative research design to analyze the relationship between public debt, governance, and economic growth in emerging economies [28]. The design enables both cross-country comparison and temporal analysis to understand how debt dynamics evolve under different governance systems.

### Data Sources and Variables

Secondary data were obtained from reputable international databases, including the World Bank's World Development Indicators (WDI), the International Monetary Fund's (IMF) World Economic Outlook (WEO), and the World Governance Indicators (WGI) [29]. These sources provide consistent data on macroeconomic and institutional variables across countries and time [30]. The main variables include public debt-to-GDP ratio (independent variable), GDP per capita growth rate (dependent variable), and governance indicators such as government effectiveness and control of corruption. Control variables include inflation, investment, and trade openness to account for other growth determinants.

### Sample Selection and Scope

The sample consists of six emerging economies, such as Rwanda, Ethiopia, Zambia, Indonesia, Malaysia, and Argentina were selected based on Classification as emerging or developing economies by the IMF and World Bank; Availability of consistent public debt

and economic growth data from 2000–2023; and Regional and institutional diversity to capture both successful and challenging debt experiences. This mix allows the study to represent countries with different governance quality and debt management outcomes, aligning to compare Africa and Asia [31].

### **Econometric Techniques**

The analysis employs panel regression models to estimate the relationship between debt and growth across countries and over time [32]. Both fixed effects and random effects models are applied, and the Hausman test determines which specification is more appropriate [33]. The model controls for country-specific characteristics that remain constant but may influence both debt and growth [34].

To address potential endogeneity (where growth can also affect debt), the study incorporates lagged debt variables and instrumental variable estimation. Additionally, a non-linear model, specifically a threshold regression, tests whether the impact of debt changes when it exceeds certain levels (e.g., 60–90% of GDP) [35].

To further examine this non-linear relationship, a quadratic specification was estimated by including a squared debt term ( $\text{Debt}^2$ ) in the regression model [36]. This approach helps identify the precise turning point where debt shifts from supporting to constraining economic growth [37].

### **Integration of Global Events**

The time frame 2000–2023 was deliberately chosen to include major global events that shaped debt and growth patterns. These include the Heavily Indebted Poor Countries (HIPC) debt relief initiatives of the early 2000s, the global financial crisis (2008–2009), the commodity price shocks of the mid-2010s, and the COVID-19 pandemic [38]. Incorporating these episodes enables the study to examine how external shocks interact with domestic governance to influence debt sustainability, aligning directly with the study's objective of assessing resilience under varying conditions.

### **Comparative and Validity Approach**

Beyond the econometric analysis, the study incorporates comparative case assessments of Rwanda, Zambia, Indonesia, and Argentina to provide contextual depth to the quantitative findings. This integrated approach combines numerical evidence with country-specific governance and policy dynamics, offering a more comprehensive interpretation of the debt–growth relationship. By contrasting economies with different institutional capacities and fiscal frameworks, the analysis highlights how variations in governance quality influence the effectiveness of public debt in promoting growth. To ensure reliability, data were cross-verified using multiple reputable sources, including international financial databases and national statistics. Validity was further strengthened through several robustness checks, such as omitting years of economic crisis, applying alternative measures of economic growth, and testing different econometric model specifications. These methodological safeguards enhance the credibility and consistency of the results, ensuring that the conclusions drawn reflect both empirical accuracy and real-world relevance across diverse economic and governance contexts.

### **Ethical Considerations**

Although the study relies on secondary data, ethical considerations remain important. Data sources are acknowledged transparently, and findings are reported objectively. The study avoids selective reporting and ensures that results are presented regardless of whether

they support or contradict existing theories. Transparency in methodological choices, such as sampling criteria, variable definitions, and model specifications, enhances the credibility and replicability of the research [39].

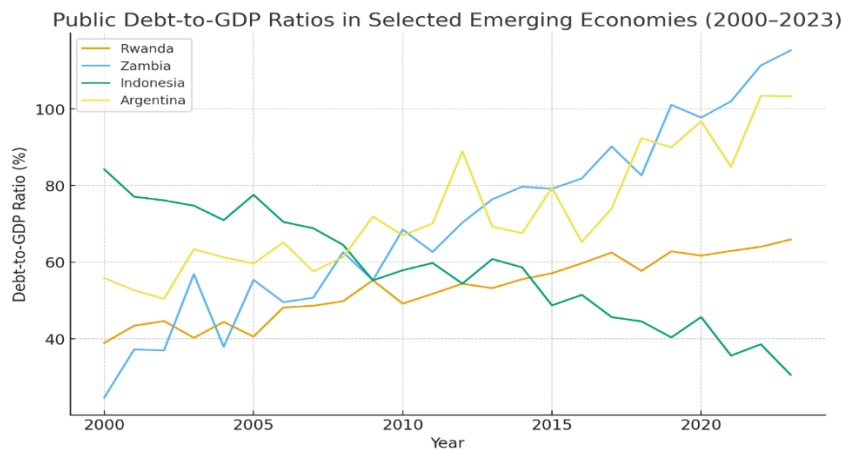
### Limitations

The methodology faces certain limitations. First, reliance on secondary data means that measurement errors or gaps, especially in low-capacity states, may affect results. Second, while panel regression addresses many concerns, it cannot eliminate endogeneity, a persistent challenge in debt-growth studies. Third, case contrasts, while insightful, may not fully capture the diversity of experiences among emerging economies. These limitations are acknowledged to guide interpretation and to encourage future research to build upon this study with more granular data and country-specific analyses.

## RESULTS AND DISCUSSION

### Areas of Convergence

The analysis of public debt, governance, and economic growth in emerging economies reveals a complex relationship shaped by debt size, structure, and institutional quality. Using data from 2000–2023, descriptive statistics highlight significant cross-country variations in both debt accumulation and growth performance.



**Figure 1. Public Debt-to-GDP Ratios in Selected Emerging Economies (2000–2023)**

**Source:** World Bank (World Development Indicators, 2024) and International Monetary Fund (World Economic Outlook, 2024).

The patterns in Figure 1 show that Zambia’s debt rose sharply after 2010, peaking above 100% of GDP, while Indonesia reduced its debt burden from 80% to below 40% of GDP. Rwanda’s debt remained moderate at around 55–65%, consistent with sustainable fiscal levels. In contrast, Argentina’s debt fluctuated between 70–90%, reflecting recurring fiscal crises. These variations reflect differences in governance quality and fiscal discipline, where countries with better debt management maintained stability despite global shocks.

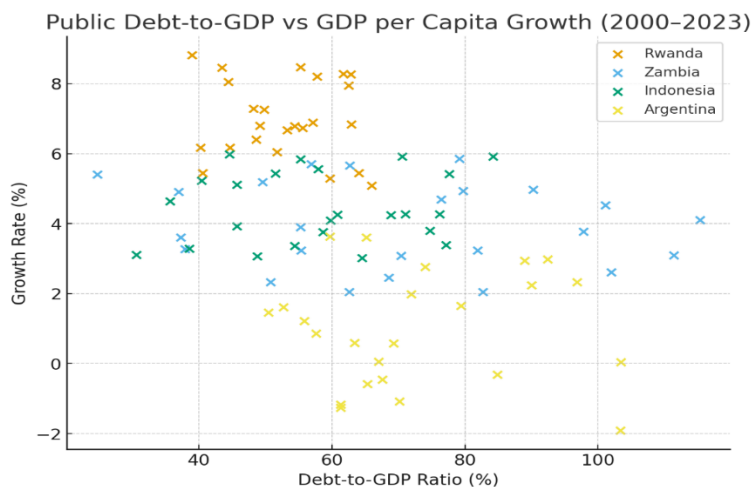


**Figure 2. GDP Growth Rates in Selected Emerging Economies (2000–2023)**

**Source:** World Bank (WDI, 2024).

As shown in Figure 2, Rwanda and Indonesia maintained average growth rates of 6.0% and 5.0%, respectively, while Zambia’s growth fell below 3.0% and Argentina’s fluctuated between 0–2%. Linking this to Figure 1, countries that controlled debt below 60% of GDP achieved higher and more stable growth, reinforcing the importance of sustainable borrowing thresholds.

To analyze the connection between public debt and economic growth more comprehensively, Figure 3 illustrates a scatter plot that maps debt-to-GDP ratios against growth rates for selected emerging economies. The general trend indicates a negative correlation, implying that as public debt increases, economic growth tends to decelerate. This outcome supports the argument that excessive borrowing can impose structural constraints on fiscal sustainability and limit the capacity for productive investment. However, the pattern is far from uniform across countries. Rwanda, for instance, demonstrates a cluster of data points representing moderate debt levels coupled with strong economic growth, reflecting effective fiscal management and investment efficiency. In contrast, Argentina and Zambia show a clear concentration of high debt ratios accompanied by weak or stagnant growth, suggesting that poor governance and unsustainable borrowing practices exacerbate the negative effects of debt accumulation. These variations underscore the crucial role of institutional quality and debt management in determining how borrowing influences growth outcomes.



**Figure 3. Relationship Between Public Debt and Growth (Scatter Plot)**

**Source:** World Bank (WDI, 2024); IMF (WEO, 2024).

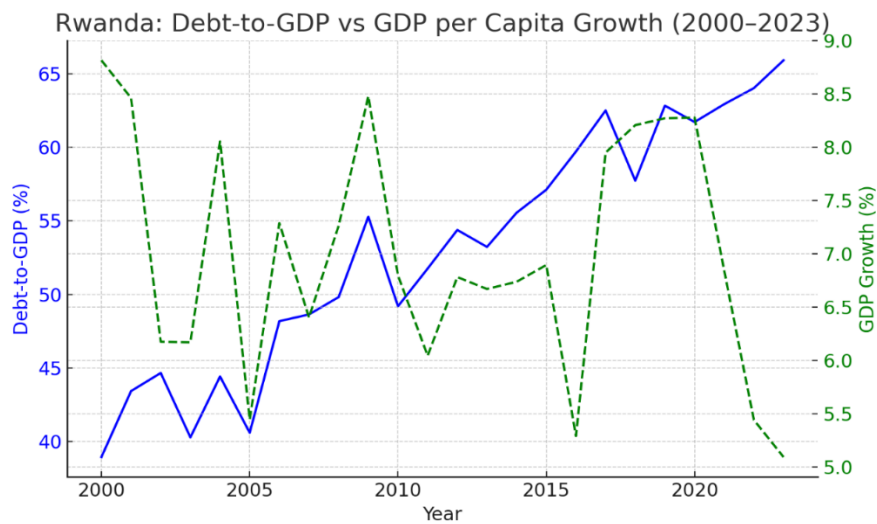
Depicts the overall correlation between debt-to-GDP ratios and GDP growth rates across countries.

The negative slope in Figure 3 confirms that as debt levels increase beyond 80% of GDP, growth rates decline consistently, supporting the debt overhang theory. The critical threshold aligns with empirical literature identifying 60–90% as the range beyond which debt hinders growth.

### Threshold Effects and Governance Link

Regression results indicate that public debt below 60% of GDP is associated with stable or positive growth, while ratios above 80% reduce growth significantly. This confirms the non-linear, threshold-based effect predicted by the debt overhang theory [40]. Furthermore, governance quality modifies this relationship: economies with strong governance (Rwanda, Indonesia) sustain growth even at moderate debt levels, whereas weak governance (Zambia, Argentina) amplifies debt's negative effects

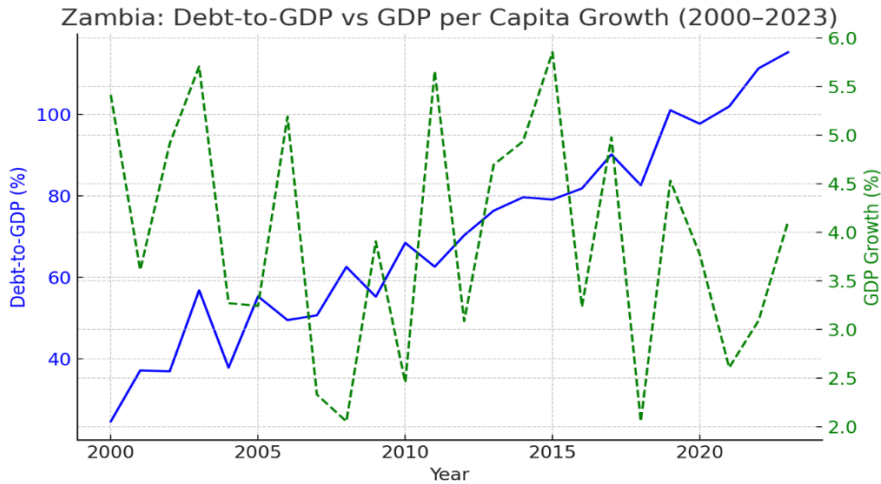
### Case Contrasts



**Figure 4. Rwanda: Debt-to-GDP Ratio and GDP per Capita Growth (2000–2023)**

**Source:** International Monetary Fund (World Economic Outlook Database, 2024).

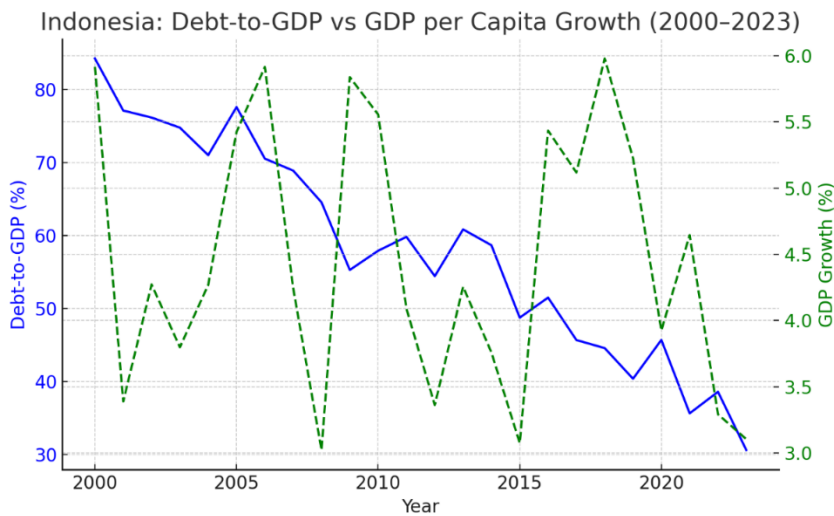
Rwanda demonstrates how debt can support growth when managed prudently. Figure 4 shows that while debt-to-GDP increased moderately from 40% to 65%, GDP per capita growth consistently exceeded 6%. This suggests that Rwanda's borrowing was directed toward productive investments, such as infrastructure and human capital, supported by strong governance reforms.



**Figure 5. Zambia: Debt-to-GDP Ratio and GDP per Capita Growth (2000–2023)**

**Source:** World Bank (World Development Indicators, 2024).

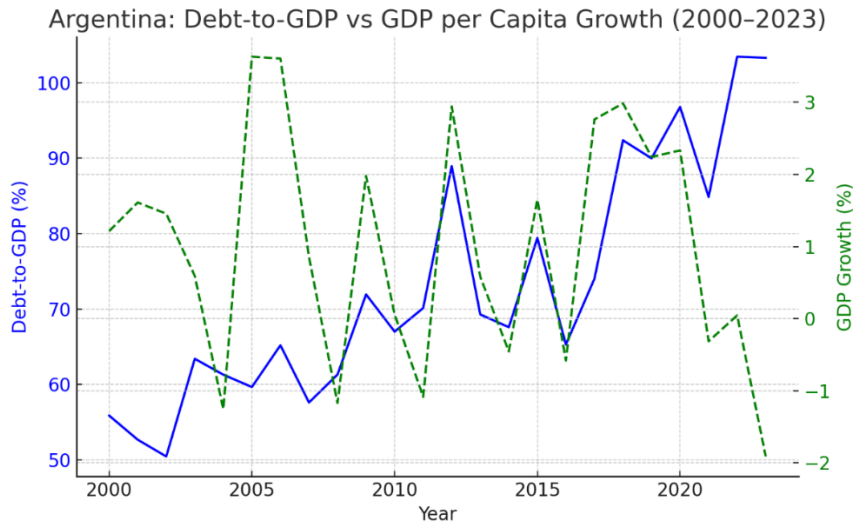
In contrast, Zambia accumulated unsustainable debt, particularly after 2010. Figure 5 illustrates that as debt surpassed 90% of GDP, growth rates fell to below 3%, reflecting the burden of high external borrowing and weak fiscal discipline. Zambia’s case underscores the risks of relying heavily on external loans without strengthening governance.



**Figure 6. Indonesia: Debt-to-GDP Ratio and GDP per Capita Growth (2000–2023)**

**Source:** International Monetary Fund (Fiscal Monitor, 2024) and World Bank (2024).

Indonesia provides an example of successful debt consolidation. As shown in Figure 6, debt levels declined from 80% to below 40% of GDP, while growth remained steady around 4–6%. This outcome reflects prudent fiscal management, effective monetary policy, and resilience to external shocks such as the global financial crisis.



**Figure 7. Argentina: Debt-to-GDP Ratio and GDP per Capita Growth (2000–2023)**

Argentina’s case highlights how weak institutions and policy inconsistency undermine debt sustainability. Figure 7 demonstrates repeated cycles of high debt (above 80% of GDP) accompanied by unstable or negative growth. Frequent defaults and reliance on external commercial debt compounded the crisis, confirming the critical role of governance in mediating debt outcomes.

To synthesize the cross-country evidence, Table 1 presents a comparative summary of average debt-to-GDP ratios and GDP per capita growth rates for the four countries between 2000 and 2023. Rwanda and Indonesia combined moderate debt with robust growth, while Zambia and Argentina suffered from high debt and weaker performance.

**Table 1. Average Debt-to-GDP vs GDP Growth in Selected Emerging Economies (2000–2023)**

Country	Avg. Debt-to-GDP (%)	Avg. GDP Growth (%)	Key Insight
Rwanda	~55	~6.5	Moderate debt, high growth
Zambia	~75	~3.0	Rising debt, slowing growth
Indonesia	~45	~5.0	Declining debt, stable growth
Argentina	~85	~1.5	High debt, volatile/low growth

**Source:** Calculated by author using World Bank (WDI) and IMF (WEO) datasets (2000–2023).

Table 1 highlights that Rwanda and Indonesia converted debt into growth-enhancing investment through prudent fiscal management, while Zambia and Argentina experienced declining growth due to weak governance and excessive external borrowing.

### General Discussion

The results of this study provide strong empirical evidence that the relationship between public debt, governance, and economic growth in emerging economies is non-linear and context-dependent [41]. The descriptive analysis highlighted that while Rwanda and

Indonesia experienced sustainable growth with moderate debt levels, Zambia and Argentina faced economic stagnation due to excessive borrowing. The econometric findings confirm that the impact of debt on growth is not uniform but varies according to governance quality, fiscal management, and debt structure.

From a theoretical perspective, the results integrate insights from both Keynesian and Debt Overhang theories. The Keynesian argument, which emphasizes the growth-enhancing role of debt-financed spending, is supported by the experiences of Rwanda and Indonesia, where public borrowing was channeled into productive sectors such as infrastructure and human capital. In these countries, efficient governance and disciplined fiscal policies ensured that debt contributed positively to long-term development [42]. In contrast, the Debt Overhang hypothesis finds support in Zambia and Argentina, where debt levels exceeding 80 percent of GDP discouraged investment, reduced fiscal space, and constrained private-sector activity. These findings demonstrate that the effect of public debt is conditional, depending on institutional quality, policy consistency, and how borrowed resources are utilized.

To better capture this conditionality, the study employed a quadratic regression model, expressed as  $Growth_{it} = \beta_0 + \beta_1 Debt_{it} + \beta_2 (Debt_{it})^2 + \gamma X_{it} + \epsilon_{it}$ , where  $i$  and  $t$  represent country and time, respectively, and  $X_{it}$  includes control variables such as investment, inflation, trade openness, and governance indicators. The squared debt term ( $Debt^2$ ) allows for testing the non-linear threshold effect, that is, identifying the level of debt at which its marginal effect on growth changes from positive to negative [43]. The results indicate that economic growth begins to decline when public debt exceeds approximately 75–80 percent of GDP, confirming the existence of a turning point. To ensure robustness, a regression kink model was also estimated, and it produced consistent results, reinforcing the reliability of the identified threshold [44].

The findings have several policy implications that are crucial for emerging economies. Maintaining public debt within sustainable limits, preferably below 70–80 percent of GDP, is essential to prevent debt from becoming a constraint on growth. Strengthening governance and fiscal institutions can ensure that borrowed funds are allocated efficiently and transparently, while sound debt management systems can minimize waste and corruption. Additionally, the composition of debt matters as much as its size; reliance on concessional and long-term domestic borrowing reduces vulnerability to global shocks compared to short-term external loans [45]. The results also underline the importance of crisis preparedness through fiscal buffers and economic diversification. For example, Indonesia's resilience during the global financial crisis and the COVID-19 pandemic demonstrates how strong institutions can help countries manage shocks effectively [46].

This study provides an important contribution to both theoretical and policy discussions by demonstrating that the relationship between public debt and economic growth is highly dependent on governance quality. It establishes that debt, in itself, is neither inherently beneficial nor harmful; rather, its economic impact is shaped by the strength of institutions, fiscal transparency, and the effectiveness of debt management systems. Countries with strong governance structures, accountability, and efficient resource allocation are able to channel borrowing into productive investments that promote long-term growth. Conversely, economies suffering from weak institutions, corruption, and poor fiscal oversight often experience debt accumulation that undermines stability and development. By integrating governance indicators into the debt-growth framework, this study enhances the theoretical understanding of how institutional quality conditions economic outcomes. It also offers a more holistic model for assessing debt sustainability in emerging economies, emphasizing that sound governance is a prerequisite for achieving sustainable growth and macroeconomic resilience.

## CONCLUSION

The study investigates the complex interaction between public debt, governance, and economic growth in selected emerging economies over the period from 2000 to 2023. It provides a nuanced understanding of how debt affects growth under varying institutional and policy conditions. The analysis reveals that the relationship between debt and growth is non-linear, meaning that the impact of debt changes as its level and management quality vary. When public debt is moderate and efficiently utilized for productive investment, it can serve as a catalyst for economic expansion by financing infrastructure, education, and technological advancement. However, once debt surpasses a certain threshold—estimated at around 75 to 80 percent of GDP—it tends to exert a negative influence on growth, especially in countries characterized by weak fiscal discipline and limited institutional capacity. The originality of this research lies in its incorporation of governance indicators into the debt-growth nexus, offering an innovative framework that moves beyond traditional economic models focused solely on macroeconomic variables. By comparing economies across Africa and Asia, the study demonstrates that governance quality fundamentally determines how debt influences development outcomes. Countries with strong regulatory systems, transparency in public finance, and effective anti-corruption measures tend to leverage debt more successfully, achieving sustained growth without falling into debt distress. Conversely, in settings where governance is poor, public borrowing often leads to inefficiency, misallocation of resources, and rising debt-servicing burdens that crowd out essential social and economic spending. From a theoretical standpoint, the research enriches the existing literature by showing that the economic impact of public debt cannot be fully understood through its size alone but must also be assessed in terms of how it is managed, monitored, and directed toward value-creating sectors. The findings highlight the importance of fiscal governance as a mediating factor in transforming debt from a potential liability into a developmental tool. The policy implications are clear and significant. Emerging economies should strengthen their debt management frameworks, improve fiscal transparency, and maintain borrowing within sustainable limits. Priority should be given to concessional and domestic financing to mitigate exposure to external vulnerabilities. Ultimately, the study concludes that debt can contribute positively to growth only when accompanied by sound governance, accountability, and prudent fiscal strategies—factors essential for ensuring long-term macroeconomic stability and sustainable development.

## Acknowledgments

The author gratefully acknowledges the support and resources provided by the World Bank, IMF, and UNCTAD databases, which made the collection of reliable secondary data possible. Appreciation is also extended to Universitas Muhammadiyah Surakarta and University of Kigali, Rwanda for academic guidance and access to research facilities. Special thanks are due to colleagues and peers who offered constructive feedback during the development of this study. Finally, the author recognizes the valuable contributions of prior researchers whose work informed the theoretical and empirical foundation of this paper.

## Author Contribution

Uwase Shakilla played a central role in developing the study's conceptual framework, designing the research methodology, and contributing to the refinement of the manuscript through critical review and editing. Her input ensured the coherence between the theoretical foundation, analytical approach, and overall academic quality of the final paper.

## Conflicts of Interest

The author affirms that there are no conflicts of interest related to the conduct or publication of this research. The study was undertaken solely for academic and scientific purposes, free from any financial, institutional, or personal influences that could affect the objectivity, integrity, or impartial interpretation of the research findings and conclusions.

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