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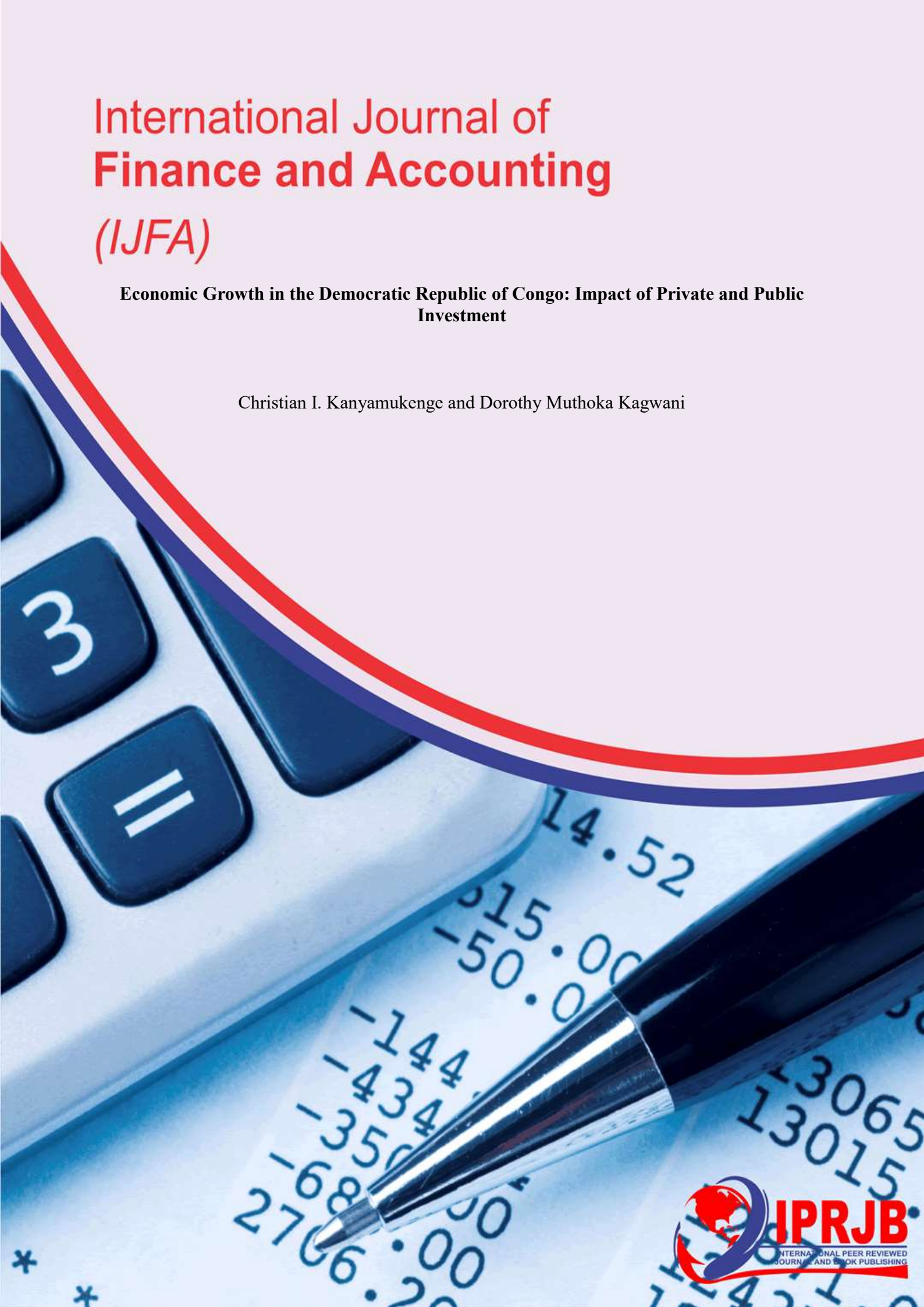

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Economic Growth in the Democratic Republic of Congo: Impact of Private and Public Investment

Christian I. Kanyamukenge
School of Business and Economics, Daystar University
Dorothy Muthoka Kagwani
School of Business and Economics, Daystar University

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Abstract

Purpose: This study investigates the impact of private and public investment on economic growth in the Democratic Republic of Congo (DRC), a resource-rich economy characterized by volatility, weak infrastructure, and governance challenges. By focusing on the dynamics of investment flows and the ease of doing business, the research seeks to clarify how capital allocation and business climate shape growth outcomes in such a fragile context.

Methodology: The study relies on secondary data from 1994 to 2023 and applies structural equation modeling (SEM) to assess both direct and indirect effects. The analysis incorporates gross fixed capital formation (GFCF), foreign direct investment (FDI), government net borrowing (GNB), and business environment measured through the Ease of Doing Business (EODB) index. This approach allows for a nuanced evaluation of moderated relationships between investment variables and GDP growth.

Findings: The results reveal that the private and public investment flows significantly influence economic growth, leading to the rejection the null hypothesis. Foreign direct investment and government net borrowing contribute positively to GDP growth, while gross fixed capital formation exerts a negative effect, reflecting inefficiencies in public investment allocation. The ease of doing business emerges as a critical determinant, with weak governance undermining the effectiveness of both private and public investment. The results align with endogenous growth theory, emphasizing that sustainable growth depends not only on investment levels but also on institutional reforms and fiscal discipline.

Unique Contribution to Theory, Practice and Policy: the study suggests efficient allocations of public funds to reduce waste, prudent debt management to safeguard fiscal stability, and diversification of foreign direct investment beyond extractive industries to enhance resilience. Strengthening of governance frameworks to transform investment flows into inclusive and sustainable growth.

Keywords: *Public Investment, Private Investment, Foreign Direct Investment, Economic Growth, Government Net Borrowing, Ease of Doing Business*

JEL Codes: *E22, O16, F21, O11, O43, O55, H63, O43*

INTRODUCTION

The Democratic Republic of Congo is one of Africa's most resource-rich nations, with vast deposits of cobalt, copper, gold, and diamonds. In 2025, the country's GDP reached U$ 78-82 billion, with an annual growth rate of around 5.3%, largely fueled by mining exports and favorable commodity prices (Quatar News Agency, 2025). However, despite this growth, the DRC continues to face challenges, including weak infrastructure, limited diversification, and governance constraints that hinder inclusive development. The population, estimated at 112.8 million in 2025, is growing at about 3.2% annually (Worldometer, 2026), further intensifying the need for sustained economic growth strategies.

Investment is a critical driver of economic growth, particularly in developing economies (Wenyang et al., 2024). Public investment in infrastructure, education, and health lays the foundation for productivity and private-sector expansion. Private investment, both domestic and foreign, stimulates innovation, job creation, and sectoral diversification (Foster et al., 2023). Yet interaction between public and private investment is not neutral. The theoretical debates emphasize the crowding-out effect, in which excessive government borrowing or inefficient public spending displaces private capital, versus the crowding-in effect, in which well-targeted public investment in infrastructure and institutions stimulates private-sector activity (Kenton, 2026). This tension is especially relevant in resource-dependent economies like the DRC, where fiscal choices and governance quality determine whether public investment complements or competes with private capital.

In the DRC, reforms under the IMF's Extended Credit Facility have sought to strengthen fiscal discipline and attract investment, while World Bank initiatives emphasize entrepreneurship and inclusive growth (International Monetary Fund, 2025). Against this backdrop, the balance between public and private investment remains a decisive factor in determining whether economic growth is sustainable and inclusive. Explicitly situating the analysis within the crowding-out versus crowding-in framework allows the study to connect macroeconomic growth patterns with the institutional and fiscal dynamics that shape investment effectiveness in fragile, resource-rich economies (Şen & Kaya, 2014).

Statement of the Problem

Although the DRC has experienced robust growth in recent years, much of it is concentrated in extractive industries, raising concerns about vulnerability to commodity price shocks (Yeboua, 2023). Such dependence exemplifies the risks of Dutch Disease, in which resource booms can distort relative prices and crowd out investment in non-resource sectors, and the broader Resource Curse, which associates resource dependence with weak institutions, rent-seeking, and governance failures (Chen, 2025). While prior studies (Ahmed, 2021; Pham et al., 2025) have examined the comparative impact of public and private investment in developing economies, they often generalize findings without addressing the unique institutional weaknesses of the DRC. Trésor (2025) highlights inefficiencies in public fund allocation, Benua (2025) underscores governance constraints limiting FDI effectiveness, and Lonzo Lubu et al. (2023) reveals the role of political instability in undermining infrastructure returns. The gap lies not in the general comparison of investment types, but in uncovering how the DRC's institutional fragility, manifested through poor governance, weak fiscal discipline, and political volatility, shapes and constrains the effectiveness of both public and private investment.

Research Objectives

The objective of this study is to evaluate economic growth using private and public investment in the Democratic Republic of Congo.

Research Hypotheses

The null hypothesis guiding this study posits that the impact of private and public investment exerts no statistically significant effect on economic growth in the Democratic Republic of Congo.

Significance of the Study

This research is significant for both academic and policy purposes. Academically, it contributes to the literature on economic growth in resource-rich developing economies, offering insights into the DRC's unique context. For policymakers, the findings will provide evidence-based guidance on how to prioritize investment strategies (whether through infrastructure development, private sector incentives, or governance reforms) to foster inclusive and resilient economic growth.

LITERATURE REVIEW

Theoretical Framework

The Endogenous Growth Theory

This theory, pioneered by economists such as Paul Romer (1986) and Robert Lucas (1988), emerged as a modern response to the limitations of the Solow-Swan model. Unlike earlier theories that treated technological progress as external, endogenous growth theory argues that long-term economic growth is driven by internal factors such as human capital development, innovation, research, and knowledge spillovers (Alexiadis, 2012). It emphasizes that deliberate investment in education, infrastructure, and innovation can sustain growth without diminishing returns. This theory is important as it directly links both public investment (in infrastructure, education, and governance) and private investment (in technology, entrepreneurship, and productive sectors) to sustainable economic growth (Javid, 2019).

However, critics note that the theory often assumes ideal institutional conditions and may overlook challenges such as corruption, political instability, or weak governance, which can undermine the effectiveness in developing economies (Ngoc & Dang, 2026). This is where institutional economics, as advanced by North (1990), becomes essential. North's framework highlights that institutions, formal rules, informal norms, and enforcement mechanisms shape incentives and transaction costs, thereby conditioning the effectiveness of both public and private investment (Faundez, 2016). In this sense, the ease of doing business (EODB) index serves as a proxy for the business environment, capturing how starting business timing, property rights, access to credit, and governance frameworks influence investment outcomes.

In the case of the Democratic Republic of Congo, where public investment in infrastructure and human capital is limited and private investment is heavily concentrated in extractive industries, combining endogenous growth theory with institutional economics provides a more comprehensive lens. It underscores the need to balance capital flows with institutional reforms that foster innovation, education, and diversification, and governance improvements (Edgard et al., 2026). The dual theoretical foundation justifies the inclusion of EODB as a moderating variable, linking institutional fragility to the effectiveness of investment in driving sustainable growth.

Empirical Review

Evidence from Developing Countries

Ahmed (2021) investigated the impact of public and private investment on the economic growth of developing countries, utilizing the panel data of 39 developing countries, for the period 1990-2019. Findings showed that public investment had a stronger positive impact on economic growth than private investment. Particularly through infrastructure and government expenditure. Private investment was significant but more volatile. However, the study left gaps in country-specific analysis and sectoral differentiation. While Pham et al. (2025) used panel data from 63 Vietnamese provinces over the period 2010-2022, comprising 819 yearly observations, to investigate the effects of public, private, and foreign direct investment on provincial economic growth in transitional economies. Results showed that public investment and foreign direct investment positively influence economic growth, while private investment showed no significant impact. The study failed to explain why private investment remains insignificant. Yet, Mohammed (2025) conducted a study on Nigeria, using data from 1990-2021, employing the Autoregressive Distributed Lag (ARDL) model and bounds cointegration test to assess the impact of private investment on economic growth. Findings revealed that private investment significantly influenced growth in both the short and long run, though with volatility, while public investment showed limited direct impact; FDI and labor force effects were insignificant, and exchange rate and inflation negatively affected growth. He encouraged future studies to be focused on the unexplored reasons behind private investment volatility and the lack of sectoral or institutional analysis to explain these dynamics.

Evidence specific to the DRC

In his study on the threshold effect of public investment on economic growth in the Democratic Republic of Congo, Trésor (2025) employed the regression model of Hansen (1999, 2000), the work of Barro (1990), and Aschauer (1989) with the data from 1985 to 2022. It was found that the public investment ratio was below 2.12%, which negatively affected growth, while private investment remained favorable. Between 2.12% and 4.1%, both stimulate growth, but beyond 4.1%, public investment stays positive as private investment loses significance. Poor allocation of public funds can significantly reduce their economic return. But with reinforcement of the institutional framework and governance, it appears essential to improve the effectiveness of public capital. This was supported by Benua (2025) using an Auto-regressive Distributed Lag (ARDL) model, which analyzed the long-term relationship between Foreign Direct Investment (FDI) and Gross Domestic Product (GDP) growth in the Southern African Development Community (SADC) Countries. The findings revealed that FDI significantly drives GDP growth, but its impact depends on governance, institutional quality, and diversification, with stronger institutions and export-oriented strategies amplifying benefits. While South Africa and Tanzania have leveraged FDI effectively, countries like Zambia and the DRC face structural constraints and resource dependence that limit their growth potential. The author highlighted the need for SADC nations to strengthen their institutions, diversify their economies, and invest in human capital to fully harness FDI development. Lonzo Lubu et al. (2023) used the ordinary least squares (OLS) method, the vector error correction model (VECM), and fully modified least squares (FMOLS, Phillips-Hansen) to evaluate the relationship between public infrastructure and economic growth in the Democratic Republic of Congo and the impact of political stability on that relationship between 1980 and 2020. Results highlighted a positive relationship between infrastructure spending and long-term economic growth. Overall, the

comparative discussion across these studies reveals both resemblances and dissemblance in how investment influences growth and employment in developing and transitional economies. Ahmed (2021), Pham et al. (2025) and Mohammed (2025) all highlight the importance of public investment, though Ahmed and Pham emphasize its stronger, more stable role compared to private investment, while Mohamed finds private investment significant but volatile in Nigeria. Sinha (2025) extends the debate by linking investment and capital formation to unemployment reduction, stressing the limited role of recurrent expenditure. In the DRC, Trésor (2025) identifies threshold effects of public investment, Lonzo Lubu et al. (2023) underscores the role of infrastructure and political stability, and Benua (2025) emphasizes governance and diversification as critical for FDI effectiveness. The similarity across these studies lies in recognizing investment (public, private, or foreign) as a key driver of growth. At the same time, the differences emerge in the relative significance of each type depending on institutional quality, volatility, and structural context. A key critique is that most studies generalize findings without adequately addressing sectoral differentiation, institutional weaknesses, or sustainability dimensions, leaving gaps in explaining why private investment underperforms in some contexts and how governance reforms could enhance long-term inclusive growth.

While Trésor (2025) and Lonzo Lubu et al. (2023) employed ARDL and VECM to capture threshold effects and long-term relationships between investment and growth, these time-series approaches remain limited in scope. They primarily estimate linear dynamics and direct associations, but they do not adequately account for the complex institutional environment of the DRC, where governance, fiscal discipline, and political stability interact with investment flows in non-linear and mediated ways. By contrast, structural equation modeling (SEM) offers a more comprehensive framework. SEM allows for the simultaneous estimation of direct, indirect, and moderated effects, making it possible to capture how the ease of doing business conditions the effectiveness of both public and private investment.

METHODOLOGY

Research Design

Grounded in a positivist philosophy, the study adopted an explanatory quantitative research design. It used econometric analysis to evaluate the impact of private and public investment on economic growth in the Democratic Republic of Congo. This design was the best fit because it allowed for statistical testing of relationships between investment variables and GDP growth, aligning with the stated objectives and hypotheses (Ahmed, 2021).

Data Sources and Data Instrument

Secondary data was collected from reliable international and national institutions, including the World Bank, IMF, UNCTAD, and the Central Bank of Congo. The dataset covered the sample period from 1994 to 2023, providing a long-run perspective that captures structural changes in the DRC economy. A structured data collection sheet was employed to ensure consistency in recording, and Python software was used for statistical analysis.

Ethical Consideration

This study relied exclusively on secondary data from the World Bank databases with no primary data collection involving human participants. Ethical clearance was obtained under the Institutional Scientific and Ethics Review Committee (ISERC) N° DU-ISERC/17/12/2025/00529G, ensuring compliance with national and international standards.

The research strictly observed confidentiality, responsible data management, and APA (7th edition) citation guidelines to safeguard originality and acknowledge prior scholarship.

Model Specification

The study had three main variables: dependent (Economic growth, measured by GDP) and independent (Private and Public investment, measured by Gross Fixed Capital Formation, GFCF). Mediating variable (Foreign Direct Investment, Government Net borrowing/lending: GNB), and intervening variable (Ease of Doing Business: EODB). The study used structural equation modeling (SEM) because it allows for testing direct, indirect, and moderated effects simultaneously, ensuring a comprehensive evaluation of how investment flows shape growth outcomes in the DRC.

$$GDPGR=\alpha+\beta_1 GFCF+\beta_2 FDI+\beta_3 GNB+\beta_4 EODB+\beta_5(GFCF\times EODB)+\epsilon$$

Where:

GDPGR: Gross Domestic Product for Growth

GFCF: Gross Fixed Capital Formation

FDI: Foreign Direct Investment

FDI: Foreign Direct Investment (mediator)

GNB: Government Net Borrowing (mediator)

EODB: Ease of Doing Business (moderator)

ϵ= Error term.

This specification enabled testing of direct effects (GFCF), indirect effects (via FDI and GNB), and moderated effects (interaction with EODB) on economic growth. This model specifies GDP as a function of domestic investment, foreign capital inflows, fiscal policy, and the business environment. Gross Fixed Capital Formation (GFCF) has a direct effect on growth, while Foreign Direct Investment (FDI) and Government Net Borrowing (GNB) act as mediators that channel investment into economic outcomes. The Ease of Doing Business (EODB) serves as a mediator, influencing how strongly domestic investment translates into growth, captured through the interaction term (GFCF x EODB). Altogether, the specification allows testing of direct, indirect, and conditional effects, showing that growth depends not only on investment itself but also on external financing, fiscal policy, and the quality of the business environment.

RESULTS

Table 1: Descriptive Statistics

	Mean	Standard Deviation	Minimum	Maximum
Gross Fixed Capital Formation	20.046	10.406	2.100	36.683
Net Inward FDI	3.111	3.133	-1.307	11.350
Net Borrowing/Lending	-0.683	1.315	-5.580	2.073
Ease of Doing Business	28.358	5.301	17.778	36.127
GDP Growth	3.399	4.875	-6.911	9.624

Source: Researcher (2026).

Table 1 highlights significant variation across key economic indicators. Gross Fixed Capital Formation averages 20.046, with widespread (10.406) ranging from 2.100 to 36.683,

suggesting uneven investment activity. Net Inward FDI is modest at 3.11, but its high deviation (3.133) and negative minimum (-1.307) reveal volatility in foreign capital inflows. Net Borrowing/Lending shows a negative mean (-0.683), indicating a tendency toward external financing needs, though the range extends from -5.580 to 2.073. Ease of Doing Business scores are relatively stable, averaging 28.358 and exhibiting limited dispersion (5.301), indicating consistent institutional conditions. GDP Growth, however, is highly volatile, averaging 3.399 but swinging from -6.911 to 9.624, reflecting episodes of contradiction and recovery. Overall, the data portrays an economy with fluctuating growth and investment patterns, underpinned by moderate institutional stability but vulnerable external financing.

In the DRC context, these results reflect an economy marked by uneven capital investment and volatile foreign inflows, underscoring structural fragility. Persistent reliance on external financing heightens vulnerability to debt pressures, while relatively stable institutional scores suggest some resilience in governance frameworks. However, sharp swings in GDP growth reveal exposure to shocks (political, commodity-driven, or external), making sustainable development dependent on stabilizing investment flows and strengthening domestic capacity.

Trend Analysis for Gross Fixed Capital Formation

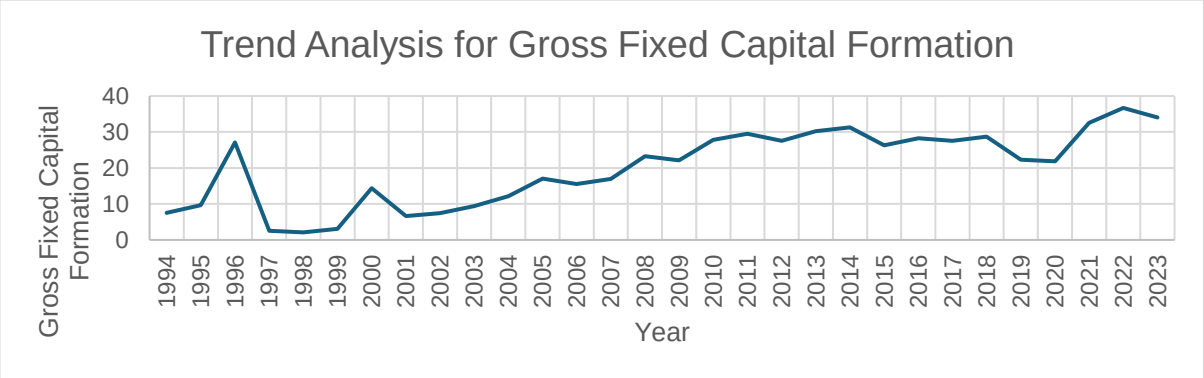

Figure 1: Trend Analysis for Growth Fixed Capital Formation

Source: Researcher (2026).

Figure 1 illustrates the long-term fluctuations in Gross Capital Formation (GFCF) between 1994 and 2023. The trend shows sharp volatility in the mid-1990s, with a peak around 1996 followed by a steep decline in 1997, reflecting instability in investment flows during that period. From the early 2000s onward, GFCF gradually recovered, though with intermittent dips, culminating in a pronounced peak around 2014, signaling a surge in capital investment. Afterward, the series stabilizes somewhat before experiencing a remarkable rise between 2020 and 2022, likely linked to post-pandemic recovery measures and renewed investor confidence. The slight drop in 2023 suggests a cooling off after this surge, but overall, the upward trajectory in recent years points to strengthening investment capacity. This pattern underscores both the vulnerability of capital formation to shocks and its resilience in rebounding over time.

In the DRC, Gross Capital Formation has mirrored periods of instability and recovery, with sharp declines in the 1990s and renewed growth from the 2000s onward. The 2014 peak reflects commodity-driven investment, while the surge between 2020-2022 highlights resilience during post-pandemic recovery. The slight 2023 dip shows vulnerability, but the overall upward trend signals strengthening investment capacity.

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Trend Analysis for Net Inward FDI

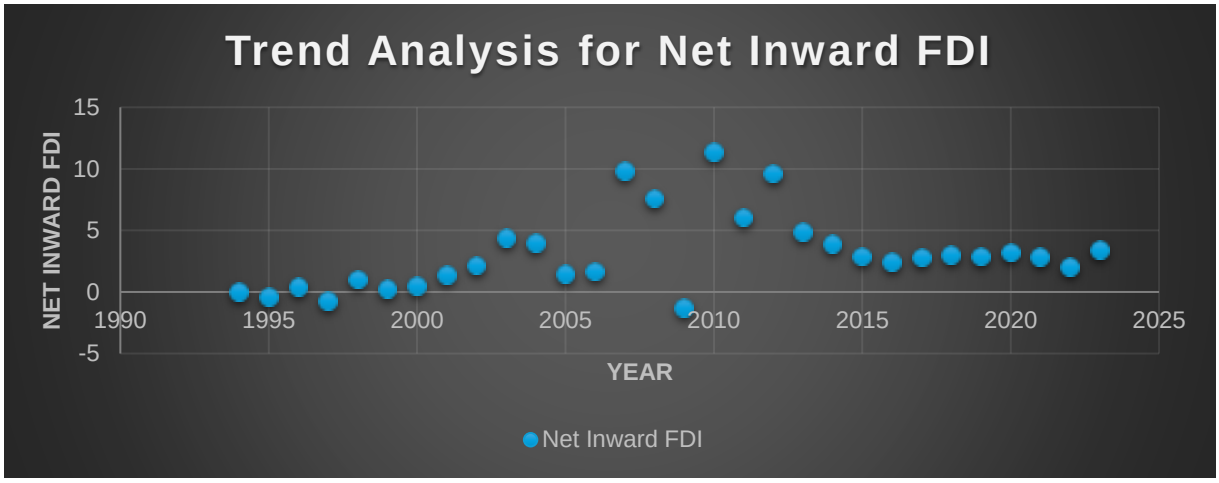

Figure 2: Trend Analysis for Net Inward FDI

Source: Researcher (2026).

Figure 2 presents the trajectory of Net Inward Foreign Direct Investment (FDI) between 1994 and 2023, revealing distinct phases of capital inflows. From 1990s through the early 2000s, FDI remained relatively subdued, reflecting limited attractiveness or cautious investor sentiment. A sharp upward shift occurs between 2006 and 2010, peaking around 2010, which signals a period of heightened investor confidence and stronger integration into global capital markets. However, this momentum was not sustained after 2010. The overall pattern suggests that while the economy experienced a significant surge in foreign investment during the mid-1990s to early 2000s, structural or external constraints limited its ability to maintain high inflows in subsequent years. This volatility, consistent with the descriptive statistics showing a mean of 3.11 and a wide range from -1.307 to 11.350, underscores both the opportunities and vulnerabilities in attracting sustained foreign capital.

In the DRC context, the trajectory of FDI reflects both opportunities and fragility in attracting foreign capital. The surge between 2006 and 2010 highlights a window of investor confidence tied to global integration and commodity prospects, but the inability to sustain inflows afterward points to structural constraints such as governance, infrastructure, and political risk. Overall, the volatility underscores the need for stronger institutional reforms and domestic capacity to stabilize and retain long-term foreign investment.

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Trend Analysis for Net Borrowing/Lending

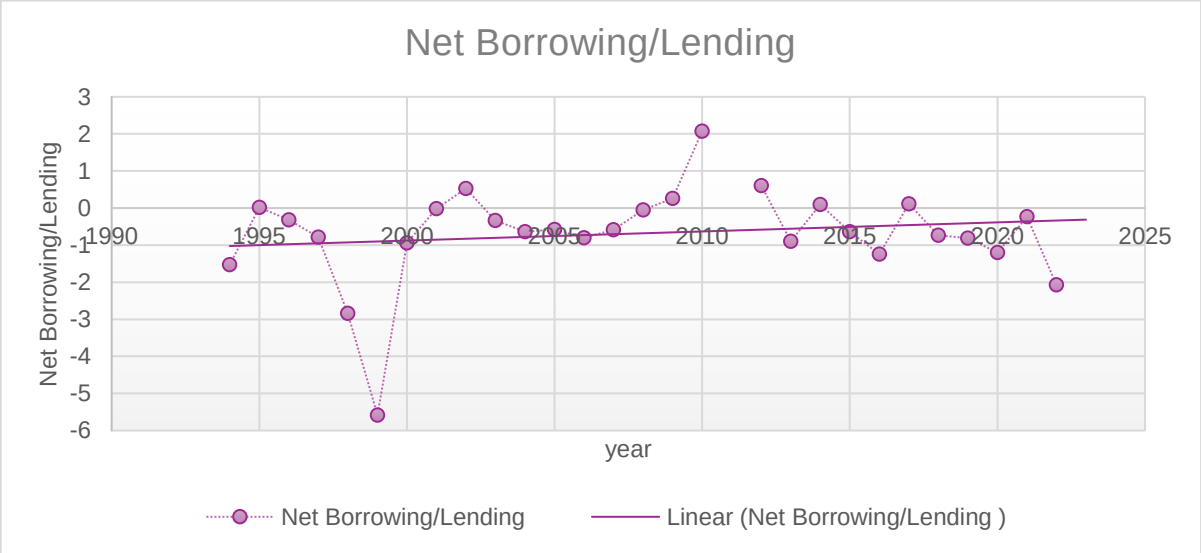

Figure 3: Trend Analysis for Net Borrowing/Lending

Source: Researcher (2026).

Figure 3 illustrates the dynamics of Net Borrowing/Lending from 1994 to 2023, showing alternating periods of deficit and surplus. The series dips sharply in the mid-1990s and again in the early 2020s, reflecting episodes of heightened borrowing needs, while peaks around 2010 indicate temporary lending capacity of reduced external financing pressures. Despite these fluctuations, the linear trend line points slightly upward, suggesting a gradual improvement in the balance over the long run. This aligns with the descriptive statistics, where the mean is negative (-0.683) but the maximum reaches 2.073, showing that while borrowing dominates, occasional lending surpluses occur. The minimum of 5.580 underscores the severity of some deficit episodes, highlighting vulnerability to external shocks. Overall, the trend conveyed a fragile but slowly improving financial position, with borrowing pressures easing modestly over time.

The net borrowing/lending trajectory reflects persistent reliance on external financing, especially during crisis periods in the 1990s and early 2020s. Temporary surpluses, such as around 2010, show moments of assessed pressures, but the overall negative balance highlights vulnerability to external shocks. The slight upward trend suggests gradual improvement, yet sustained progress will depend on strengthening fiscal discipline and reducing dependence on external debt.

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Trend Analysis for Ease of Doing Business

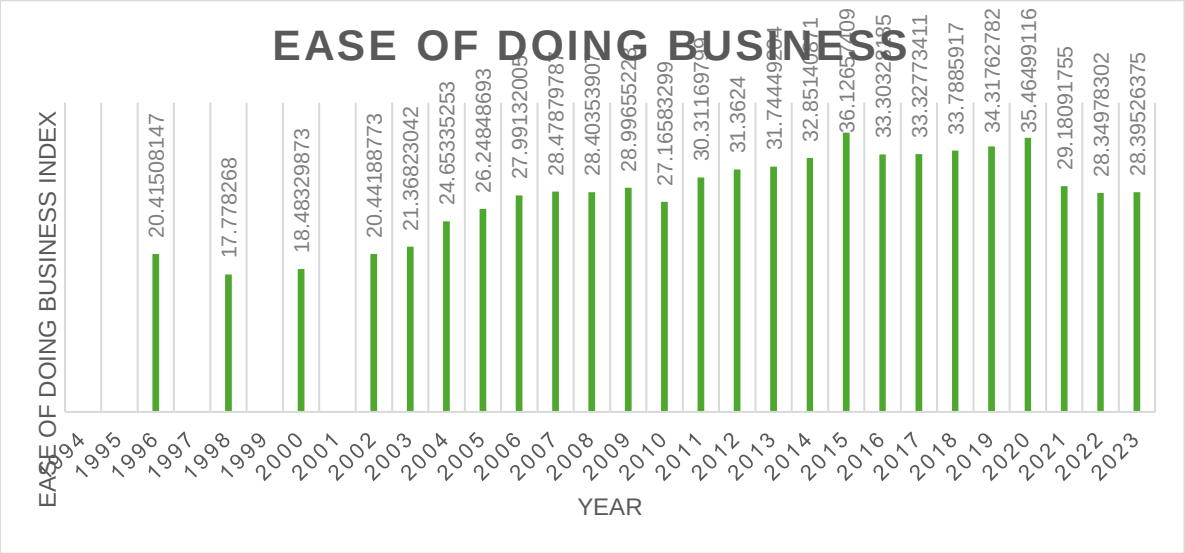

Figure 4: Trend Analysis for Ease of Doing Business

Source: Researcher (2026).

Figure 4 depicts the evolution of the Ease of Doing Business Index from 1994 to 2023, showing a generally upward trajectory with some interruptions. The index begins at relatively low levels in the mid-1990s, increasing in 1996 to 20.42, but dipping to 17.77 in 1998. However, the sharp decline indicates a setback, possibly linked to governance or external shocks, before steadily rising through 2000 to 2015. It was notable that the upward climb peaked at 36.13 in 2015, which reflects notable improvements in institutional and regulatory frameworks. There was a slight dip between 2016, but it slightly went up until 2020. After stabilizing around 33.30, the index resumed its upward momentum, reaching a high of 35.46 in 2020. The slight decline in 2021 - 2023 suggests challenges in sustaining reforms, though the overall mean of 28.36 and relatively narrow standard deviation (5.30) highlight a consistent improvement trend over nearly three decades.

Trend Analysis for GDP Growth

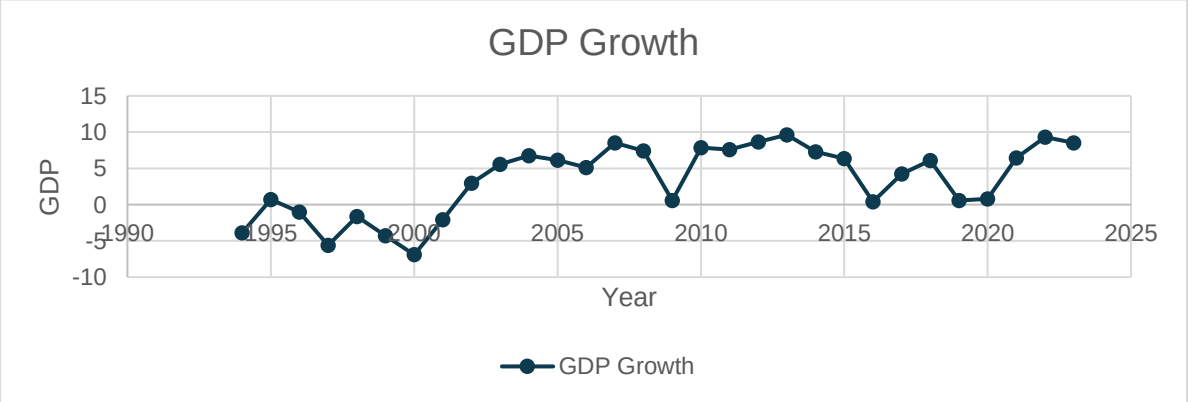

Figure 5: Trend Analysis for GDP Growth

Source: Researcher (2026).

Figure 5 highlights the volatility of GDP growth between 1994 and 2023, marked by alternating periods of expansion and contraction. The series shows sharp downturns around 1994, 2000, 2009, 2016 and 2019, reflecting episodes of economic stress, while peaks in 2004, 2007, 2010, 2013, and 2022 indicate phases of recovery and acceleration. The average growth rate of 3.399, coupled with a wide standard deviation of 4.875, underscores the instability of output performance, with extremes ranging from – 6.911 to 9.624. This variability suggests that external shocks and domestic structural challenges have repeatedly disrupted growth momentum, though resilience is evident in the rebounds that follow. The recent upswing toward 2022 points to renewed dynamism, possibly linked to investment surges and institutional improvements. Overall, the trend conveys an economy prone to cyclical swings but capable of regaining momentum after downturns.

Diagnostic Tests

Model Fit Diagnostics

Table 2: Structural Equation Model Fit Indices

Fit Index	Value
Comparative Fit Index (CFI)	0.9638
Root Mean Square Error of Approximation (RMSEA)	0.0364
Chi-square / Degrees of Freedom (χ^2/df)	1.0913

Source: Researcher (2026).

Table 2 presents the model fit diagnostics for the Structural Equation Model, and the indices indicate an excellent overall fit. The Comparative Fit Index (CFI) is high at 0.9638, exceeding the acceptable threshold of 0.90 and approaching the ideal benchmark of 0.95, suggesting that the model adequately captures the observed data structure. The Root Mean Square Error of Approximation (RMSEA) is low at 0.0364, well below the acceptable limit of 0.08, pointing to a close fit with minimal misfit. Similarly, the Chi-square to degrees of freedom ratio (χ^2/df) stands at 1.0913, comfortably below the recommended maximum of 3, which further confirms that the model represents the data with strong accuracy. Taken together, these diagnostics imply that the specified SEM provides a reliable and valid representation of the underlying relationships among variables.

Normality

Multicollinearity

Table 3: Multicollinearity

Variable	VIF	Tolerance (1/VIF)	Decision
Gross Fixed Capital Formation (% of GDP)	4.07	0.2456	Acceptable
Net Inward Foreign Direct Investment (% of GDP)	1.60	0.6259	No concern
Net Borrowing/Lending (% of GDP)	1.48	0.6770	No concern

Source: Researcher (2026).

Table 3 provides insights into multicollinearity among the explanatory variables. Gross Fixed Capital Formation shows a Variance inflation (VIF) of 4.07, which is within acceptable limits but indicates moderate correlation with other predictors. Net Inward FDI and Net Borrowing/Lending both have low VIFs (1.60 and 1.48, respectively), suggesting no serious

collinearity concerns for these variables. The tolerances (0.2456, 0.6259, and 0.6770) confirm that the predictors retain sufficient independent variance.

Residual and Modification Indices

Table 4: Residual and Modification Indices

Statistic	Value	Interpretation
Observations	23	Residuals computed for all usable observations
Mean	−3.81e-08 (≈ 0)	Residuals are centered around zero
Std. Deviation	2.88	Acceptable dispersion
Minimum	−6.23	No extreme negative outliers
Maximum	4.40	No extreme positive outliers

Source: Researcher (2026).

The residual and modification indices in Table 5 indicate that the model is performing adequately. With 23 usable observations, the residuals cover the full dataset, ensuring representativeness. The mean residual is essentially zero, showing that the model is unbiased overall. The standard deviation of 2.88 reflects moderate dispersion, which is acceptable for this sample size. The minimum residual of – 6.23 suggests no extreme negative outliers, while the maximum of 4.40 indicates no extreme positive deviations. Together, these values show that residuals are centered, balanced, and within reasonable bounds. Overall, the distribution supports the adequacy of the model specification and suggests no major misfit.

Inferential Analysis

Correlation Analysis

Table 5: Correlation Analysis

Variable	GDPGR	GFCF	FDI	GNB	EODB
GDP Growth	1.000				
Gross Fixed Capital Formation (GFCF)	0.6595*	1.000			
Net Inward FDI	0.6882*	0.3976*	1.000		
Government Net Borrowing/Lending	0.4025*	0.3480	0.4343*	1.000	
Ease of Doing Business	0.3959	0.6431*	0.2157	0.1003	1.000

Source: Researcher (2026).

Model Table 6 highlights the relationship among GDP growth, investment, and institutional factors. GDP growth is strongly correlated with both gross fixed capital formation (0.6595) and Net inward FDI (0.6882), underscoring the importance of capital accumulation and foreign investment in driving growth. Net borrowing/Lending also shows a positive though weaker correlation with GDP growth (0.4025), suggesting that external financing plays a supportive but less dominant role. Ease of Doing Business has only modest correlations with GDP growth (0.3959) and FDI (0.2157), but a stronger link with GFCF (0.6431), indicating that institutional reforms may primarily stimulate domestic investment. Overall, the matrix suggests that growth in this context is most directly tied to investment flows, while institutional quality exerts its influence indirectly through capital formation.

Table 6: Structured Equation Model

No.	Dependent Variable	Path	Independent Variable	Estimate	Std. Error	p-value
1	FDI	←	GFCF	0.1908	0.0888	0.0317
3	GNB	←	GFCF	0.0982	0.0354	0.0055
5	EODB	←	FDI	0.3119	0.2807	0.2665
6	EODB	←	GNB	−0.0874	0.6931	0.8996
7	GDPGR	←	GFCF	−1.2237	0.3032	0.0001
9	GDPGR	←	FDI	3.9444	0.1467	<0.0001
10	GDPGR	←	GNB	3.0629	0.3626	<0.0001
11	GDPGR	←	EODB	−5.3696	0.0862	<0.0001
12	GDPGR	←	GFCF × EODB	0.0578	0.0125	4.05e-06
14	GDPGR	←	FDI × EODB	−0.1190	0.0055	<0.0001
15	GDPGR	←	GNB × EODB	−0.1119	0.0139	8.88e-16
16	EODB	~~	EODB (Variance)	21.6790	5.5975	0.0001
17	FDI	~~	FDI (Variance)	7.7456	1.9999	0.0001
18	GNB	~~	GNB (Variance)	1.2264	0.3167	0.0001
19	GDPGR	~~	GDPGR (Variance)	4.8354	1.2485	0.0001

Source: Researcher (2026).

Table 13 provides a clear picture of the structural equation model (SEM) results. Gross Fixed Capital Formation (GFCF) significantly influences both FDI ($\beta = 0.1908$, $p = 0.0317$) and Net Borrowing/Lending ($\beta = 0.0982$, $p = 0.0055$), showing its role in attracting investment and shaping external financing. FDI and GNB all have strong, significant positive effects on GDP growth, with FDI ($\beta = 3.9444$, $p < 0.0001$) and GNB ($\beta = 3.0629$, $p < 0.0001$) being particularly impactful. Interestingly, Ease of Doing Business (EODB) has a negative direct effect on GDP growth ($\beta = 5.3696$, $p < 0.0001$), suggesting that institutional reforms may not translate directly into growth but instead interact with investment variables. Indeed, the interaction terms (GFCF x EODB, GNB x EODB) are both significant, indicating that institutional quality moderates the impact of investment and financing on growth. Variance estimates for EODB, FDI, GNB, and GDPGR are also significant, confirming the model's robustness. Overall, the SEM suggests that growth is driven by investment and financing flows, but their effectiveness is conditioned by the ease of doing business.

Model specification

GDPGR= −1.2237. GFCF + 3.9444.FDI + 3.0629. GNB + −5.3695. EODB + 0.0577.(GFCF×EODB) + 4.835433

Where:

GDPGR: Gross Domestic Product Growth

GFCF: Gross Fixed Capital Formation

FDI: Foreign Direct Investment

FDI: Foreign Direct Investment (mediator)

GNB: Government Net Borrowing (mediator)

EODB: Ease of Doing Business (moderator)

Discussion

The results of the study reject the null hypothesis that private and public investment have no significant effect on economic growth in the Democratic Republic of Congo. Both foreign direct investment (FDI) and government net borrowing (GNB) show strong positive impacts on GDP growth, while gross fixed capital formation (GFCF), representing public investment, has a negative effect. This indicates that investment flows matter for growth, but the efficiency of allocation is crucial. In particular, the positive effect of GNB suggests that when the government borrows to finance productive activities, such as infrastructure or capital formation, it can stimulate growth. However, the negative effect of GFCF highlights inefficiencies in public spending, where funds may not be directed toward growth-enhancing sectors.

These findings align with endogenous growth theory, which emphasizes the role of internal drivers such as human capital, innovation, and institutional quality. The significant moderating effects of the ease of doing business (EODB) show that governance and institutional frameworks determine whether investment flows translate into growth. Positive interactions between GFCF and EODB suggest that reforms can improve the effectiveness of public investment, while negative interactions with FDI and GNB indicate that weak institutions undermine the potential benefits of private and government-financed investment.

Compared to existing literature, the results echo studies that stress the importance of investment but diverge in showing the negative impact of public investment in the DRC context, consistent with Trésor's threshold findings. They also confirm Mohammed's observation of private investment volatility and Benua's emphasis on governance for FDI effectiveness. Lonzo Lubu's findings on political stability are reinforced by the strong negative effect of EODB on GDP growth, underscoring institutional fragility. The positive role of government net borrowing is particularly relevant in the DRC, where fiscal deficits are often used to finance infrastructure and social programs. When managed well, borrowing can stimulate growth, but poor governance risks turning debt into a burden rather than a driver of development.

Overall, the evidence demonstrates that investment (public and private) and government borrowing significantly influence growth in the DRC, but institutional weaknesses distort outcomes. Policy implications point to the need for better allocation of public funds, diversifications point to the need for better allocation of public funds, diversification of FDI beyond extractives, and prudent management of government borrowing. Strengthening governance and regulatory frameworks is essential to ensure that debt-financed spending and investment flows contribute to sustainable, inclusive growth rather than reinforcing volatility and resource dependence.

CONCLUSION AND RECOMMENDATIONS

This study investigated the impact of private and public investment on economic growth in the Democratic Republic of Congo (DRC), with the government net borrowing (GNB) and foreign direct investment (FDI) as mediators, and institutional quality (Ease of Doing Business, EODB) as a moderator. The findings reject the null hypothesis, showing that investment flows significantly influence growth outcomes. FDI and GNB positively contribute to GDP growth, while gross fixed capital formation (GFCF), a proxy for public investment, has a negative effect, reflecting inefficiencies in allocation. Moreover, institutional quality strongly shapes outcomes: weak governance undermines the benefits of both private and government-financed

investment, while reforms can enhance the effectiveness of public capital. Overall, the results highlight that investment is a critical driver of growth in the DRC, but its impact is contingent on governance, fiscal discipline, and diversification.

Recommendations

(1) Reallocate Public Investment Efficiently: Direct GFCF toward infrastructure, education, and health to ensure that public spending yields positive returns rather than crowding outgrowth.
(2) Strengthen Governance and Institutions: Improve transparency, accountability, and regulatory efficiency to enhance the Ease of Doing Business. Stronger institutions will allow both FDI and government borrowing to translate into sustainable growth.
(3) Diversity FDI Beyond Extractives: Encourage foreign investment in manufacturing, agriculture, and services to reduce dependence on volatile commodity markets and promote inclusive development.
(4) Prudent Fiscal Management of Borrowing: Ensure that debt-financed spending is directed toward productive sectors. Borrowing should be accompanied by fiscal discipline to avoid unsustainable debt burdens.
(5) Support Private Sector Development: Provide incentives for entrepreneurship and innovation, particularly in non-resource sectors, to stabilize private investment flows and reduce volatility.

Further Research

(1) Sectoral Differentiation: Further studies should disaggregate investment impacts by sector (e.g., mining, agriculture, manufacturing) to identify where public and private capital are most effective.
(2) Institutional Quality and Governance Mechanisms: More research is needed on how corruption, political instability, and weak governance distort investment outcomes in the DRC.
(3) Debt Sustainability Analysis: Investigate the long-term effects of government net borrowing on fiscal stability and growth, distinguishing between productive and non-productive borrowing.
(4) Comparative Regional Studies: Explore how investment-led growth in the DRC compares with other resource-rich African economies, to draw lessons on diversification and institutional reforms.
(5) Advanced Econometric Approaches: Employ dynamic panel models, threshold regressions, or non-linear SEM to capture feedback loops and complex interactions between investment, governance, and growth.

Competing Interests

We declare that we have no financial or personal relationships that may have inappropriately influenced us in writing this article.

Author Contribution

The corresponding author conceptualized the study, collected and analyzed the data, and drafted the manuscript. Co-author provided supervisory guidance, contributed to the theoretical framing, and reviewed the manuscript for academic rigor. Both authors met the criteria for authorship and approved the final version of the article. All correspondence concerning this article should be addressed to the corresponding author's details.

Data Availability

The study relied exclusively on secondary data obtained from international and national institutions, including the World Bank, IMF, UNCTAD, and the Central Bank of Congo. These datasets are publicly available from the respective organizations.

Disclaimer

The views expressed in this article are those of the authors and do not represent the official position of the University, the founders, or any affiliated institution.

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