
ARTÍCULO PRODUCTO DE INVESTIGACIÓN

**Interest Rate Dynamics and Investment Performance in Nigeria (1981–2025):
An Econometric Analysis**

Dinámica de las tasas de interés y desempeño de la inversión en Nigeria (1981–2025):
un análisis econométrico

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Abstract

Interest rate dynamics remain central to investment behavior in developing economies like Nigeria, where macroeconomic instability and financial sector constraints shape capital formation. This study examines the impact of interest rates on investment in Nigeria while also evaluating the roles of money supply and exchange rate as complementary determinants.

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Annual time-series data from 1981 to 2024 were sourced from the Central Bank of Nigeria. Stationarity was tested using the Augmented Dickey-Fuller (ADF) approach, and all variables were found to be integrated of order one after first differencing. The Ordinary Least Squares (OLS) technique was employed to estimate the investment model. The findings reveal that interest rates exhibit a negative but statistically insignificant relationship with investment, suggesting that higher borrowing costs discourage investment, though not strongly. In contrast, money supply and exchange rate show positive and statistically significant effects on investment. The model demonstrates high explanatory power, indicating that macroeconomic variables jointly influence investment performance in Nigeria. The weak significance of interest rates reflects structural issues such as limited access to formal credit and reliance on informal financing. Meanwhile, increased liquidity and exchange rate dynamics enhance investment by improving credit availability and attracting capital inflows. Effective investment growth in Nigeria depends more on monetary liquidity and exchange rate stability than on interest rate adjustments alone. This study provides an integrated empirical assessment of interest rate, money supply, and exchange rate interactions, highlighting the limited standalone effectiveness of interest rate policy in Nigeria's investment dynamics.

Keywords: interest rate, investment, economic growth, development

Resumen

La dinámica de las tasas de interés sigue siendo un factor central del comportamiento de la inversión en economías en desarrollo como Nigeria, donde la inestabilidad macroeconómica y las limitaciones del sector financiero condicionan la formación de capital. Este estudio examina el impacto de las tasas de interés sobre la inversión en Nigeria, al tiempo que evalúa el papel de la oferta monetaria y el tipo de cambio como determinantes complementarios. Se utilizaron datos anuales de series temporales correspondientes al período 1981–2024, obtenidos del Banco Central de Nigeria. La estacionariedad de las series se verificó mediante la prueba de Dickey-Fuller Aumentada (ADF), encontrándose que todas las variables estaban

integradas de orden uno después de aplicar la primera diferenciación. Para estimar el modelo de inversión se empleó la técnica de Mínimos Cuadrados Ordinarios (MCO). Los resultados revelan que la tasa de interés presenta una relación negativa, aunque estadísticamente no significativa, con la inversión, lo que sugiere que un mayor costo del crédito desincentiva la inversión, pero sin un efecto suficientemente fuerte. En contraste, la oferta monetaria y el tipo de cambio muestran efectos positivos y estadísticamente significativos sobre la inversión. El modelo presenta un alto poder explicativo, lo que indica que las variables macroeconómicas influyen conjuntamente en el desempeño de la inversión en Nigeria. La escasa significancia de la tasa de interés refleja problemas estructurales, como el acceso limitado al crédito formal y la dependencia de mecanismos de financiamiento informal. Por su parte, el aumento de la liquidez y la dinámica del tipo de cambio favorecen la inversión al mejorar la disponibilidad de crédito y atraer flujos de capital. En consecuencia, el crecimiento efectivo de la inversión en Nigeria depende en mayor medida de la liquidez monetaria y de la educabilidad cambiaria que de los ajustes aislados en las tasas de interés. Este estudio aporta una evaluación empírica integrada de las interacciones entre la tasa de interés, la oferta monetaria y el tipo de cambio, destacando la limitada eficacia de la política de tasas de interés, considerada de manera independiente, para explicar la dinámica de la inversión en Nigeria.

Palabras clave: tasa de interés, inversión, crecimiento económico, desarrollo

Introduction

Interest rates remain one of the most influential instruments in shaping economic performance across the world. It serves as a key determinant of investment behavior, savings, capital formation, and ultimately, national development (Ajayi et al., 2017). In both developed and developing economies spanning Africa, Europe, and Asia, interest rate policies have profound implications on the pace and sustainability of economic growth (Oyadeyi et al., 2025; Nguyen, 2025). For Sub-Saharan Africa, where most economies are still developing, interest rate management is particularly vital as it drives private investment, facilitates capital inflows, and supports broader economic transformation. According to Emako et al. (2022), investment-led

growth is crucial for developing nations aspiring to match the competitiveness of industrialized economies. Fabiyi (2025) further notes that lowering interest rates can stimulate investment growth, enhance trade liberalization, and foster international capital mobility. Empirical studies have also shown that favorable interest rates enhance global investment, communication, and innovation by facilitating the exchange of ideas and resources among nations. Investment stimulates capital accumulation, employment generation, and technological advancement, which together promote industrialization and social development (Danja & Wang, 2024; Chinedu, 2025). Therefore, affordable interest rates have become synonymous with global economic integration and interdependence, bridging the gap between developed and developing nations through increased Foreign Direct Investment (FDI) and trade relations (Latifat et al., 2026).

Interest rate, in economic terms, refers to the reward paid to individuals or institutions that provide capital for investment or consumption purposes. Malienko (2024) defines it as the payment made by a borrower to a lender for the use of money over a specific period, reflecting the cost of borrowing and the return on savings. In Nigeria, the government has over time adopted various policies to regulate or liberalize interest rates as part of its monetary policy strategy (Ani & Onu, 2021). The Structural Adjustment Programme (SAP), introduced in 1986 under the administration of General Ibrahim Babangida, marked a significant shift in this regard. One of its core components was interest rate deregulation, managed by the Central Bank of Nigeria (CBN), to promote efficiency in financial markets and align domestic monetary policy with international standards (Olowofela et al., 2018). Within the framework of the CBN, interest rate can also be viewed as the cost of capital use and the payment to fund owners willing to invest their resources in productive ventures.

Nigeria has witnessed considerable fluctuations in interest rates, which have, in turn, influenced the levels of investment and overall economic performance. Since interest rates determine the cost of borrowing, variations in their level directly affect the ability of firms and individuals to undertake investment activities (Dahunsi, 2020). Theoretically, interest rates are determined by the forces of demand and supply for capital, and equilibrium is reached

at the intersection of savings and investment. Investment, defined as the expenditure on capital goods leading to additions in the stock of physical assets, is often sensitive to changes in interest rates (Mamudu, 2026). When interest rates are low, borrowing becomes cheaper, encouraging firms to expand production and invest in new technologies. Conversely, high-interest rates discourage borrowing and can suppress productive investment (Adeusi et al., 2018). This inverse relationship between interest rates and investment is widely acknowledged in classical and Keynesian economic theories, underscoring the central role of interest rates as a monetary policy tool (Abumustafa, 2025).

In Nigeria, the history of interest rate regulation reflects broader shifts in macroeconomic policy. Before 1986, the CBN set fixed interest rates for different sectors based on government priorities (Inam & Etim, 2020). This system, though intended to promote targeted investment, often led to inefficiencies and credit misallocations. The post-SAP era ushered in a deregulated regime in which market forces demand and supply of funds determined interest rates. Under this new system, deposit money banks were free to set their lending and deposit rates, promoting competition and improving credit access (Oladimeji, 2021). However, the deregulated environment also exposed the financial sector to volatility, particularly during periods of economic shocks such as the oil price collapse of the 1980s and the COVID-19 pandemic of 2020 (Olujobi et al., 2022).

Theoretical perspectives on interest rate determination vary, but three major schools dominate economic discourse: the Classical Theory, the Liquidity Preference Theory (Keynesian approach), and the Loanable Funds Theory (Jossa, 2021). Each emphasizes different mechanisms linking savings, investment, and interest rates, yet they all acknowledge the fundamental role of interest rates as a balancing tool between the supply and demand for funds (Qasim et al., 2025). These theories collectively inform monetary authorities' decisions in managing inflation, employment, and output levels.

Interest rate regulation in Nigeria has evolved alongside efforts to achieve key macroeconomic objectives, such as full employment, price stability, and sustainable GDP growth. Before SAP,

the CBN periodically adjusted interest rates to reflect sectoral priorities. Post-1986 reforms shifted toward a market-based approach to attract private capital and foreign investment (Nduka, 2025). Affordable interest rates are crucial for stimulating investment in productive sectors such as agriculture, manufacturing, and small-scale enterprises, which collectively drive economic growth and diversification (Abdullahi et al., 2021). Yet, interest rate management has remained a delicate balancing act between encouraging investment and controlling inflation.

In practical terms, policy shifts have significantly affected Nigeria's credit market. In the 1980s and early 1990s, lending rates increased from about 6% to 10.5%, reflecting efforts to control inflation and stabilize the naira. Following the 1987 deregulation, interest rates became market-driven, though frequent economic disruptions created fluctuations that discouraged long-term investment. The CBN, recognizing these challenges, reintroduced partial regulation in 1994, setting deposit rates between 12% and 15% and capping lending rates at 21%. A flexible regime was followed in 1995, allowing banks to determine lending rates based on market conditions (Umoh et al., 2012). Recently, the Monetary Policy Committee (MPC) of the CBN has adjusted the Monetary Policy Rate (MPR) in response to inflationary pressures and exchange rate instability. For instance, in 2020 the lending rate averaged 19.10%, the MPR stood at 13%, and the savings rate at 2.40%. By 2024, the MPR had been increased to 18%, reflecting the CBN's tightening stance to curb inflation while balancing growth objectives (CBN, 2021; Iriabije et al., 2024).

Despite the evident importance of interest rates in shaping Nigeria's investment climate, there remains a dearth of comprehensive empirical research analyzing their impact on investment levels across key sectors. Existing studies often present mixed findings, with some indicating that high-interest rates constrain private sector investment, while others suggest that moderate rates can promote efficient capital allocation and financial discipline. This ambiguity underscores the need for a systematic examination of the relationship between interest rates and investment in Nigeria's evolving economic context (Frederick & Benjamin, 2025; Onyekachi & Koginam, 2025).

The overarching objective of this study, therefore, is to examine the effect of interest rates on investment levels in Nigeria. Specifically, it seeks to identify the major determinants of interest rates in the country, assess the impact of interest rates on money supply, and evaluate how changes in interest rates influence investment decisions and outcomes. By addressing these objectives, the study contributes to policy formulation aimed at achieving sustainable economic growth through effective interest rate management.

1. Theoretical Framework and Review of Related Literature

1.1. The Classical Theory of Interest Rate

The classical theory postulated that the interest rate is an equilibrium factor between the demand for and the supply of investible funds. The equality between savings and investment is brought about by the mechanism of interest rate. The theory sees interest rates as the element that equates savings and investment (Arapovic, 2022). The theory holds the proposition based on the general equilibrium theory of interest rate determined by the demand for and supply of capital. The demand for capital stems from investment decisions, while the supply of capital results from savings in the community (Cole, 2022). According to the theory, all these will lead to a robust economy. Again, the theory postulates that when saving exceeds investment, the rate of interest will fall, discouraging savings on one hand and encouraging investment on the other hand. This tendency continues operating until equality between savings and investment gets established (Arapovic, 2022). Similarly, if investment exceeds savings, the rate of interest rises to discourage investment and encourage savings until equality is established between savings and investment. Thus, the classical system regards the rate of interest as the equilibrium force between savings and investment, which will boost the economy eventually. The theoretical approach to the savings-investment nexus is based on the assumption of full employment in the economic system (Hochstein, 2020).

1.1.1. Loanable Fund Theory

This theory states that the supply of loanable funds is a composite one. It is composed of real savings and credit money. It is composed of the demand for investment funds and the demand for speculative cash balances or hoarding. This theory recognizes the role of hoarding and created money in determining interest rates (Bertocco & Kalajzić, 2022). Thus, according to this theory, the rate of interest is the function of these four variables: saving, investments, desire to hoard, and quantity of money.

1.1.2. Resource Gap (RG) Theory

The Resource Gap theory was developed by Chery and Stout in 1966. The theory argues that the shortages in local resources to meet the level of investment and consumption in the economy that push economies to seek capital somewhere else depend on the rate of interest (Cornia, 2020). It further argues that domestic savings do not always equal investment. According to Tyoga et al. (2024), when savings fall short of investment, there is bound to be a savings-investment gap. To bridge this gap, the government would either borrow from the home economy or from foreign countries, thereby creating a foreign exchange gap between both countries. The difference between these two gaps determines the source of funding the deficit. The gap may be financed through domestic sources if the saving-investment gap is larger relative to the foreign exchange gap; otherwise, financing will be from international sources. If domestic sources are preferred, then the rate of interest determines the amount of funding, which has a direct effect on the rate of growth of the local economy (Oyewole et al., 2023). However, if the government chooses financing investment from external sources, then interest rate parity theory assumes control.

1.2. Keynesian Theory

The theory opined that improved savings and investment are always prerequisites to a robust economy. According to Keynesian, the determination of interest rates will be found in the

money market, and these are basically the supply and demand for money. He identified three motives for the desire to hold cash: transaction motive, precautionary motive, and speculative motive (Jossa, 2021). The first two motives are influenced by the level of income, while the speculative motive is influenced by the level of interest rate. The theory argues that interest rates are influenced by the demand for and supply of money in a stock. It stressed that the rate of interest is mostly a monetary phenomenon (Deleidi, 2017). The theory further opined that low-interest rates as a factor of cost administered are inimical to growth in savings and thus investment. The theory also argues that a rise in the real interest rate will have robust positive effects on savings, which will improve investment, because those with excess liquidity will be encouraged to save because of the high-interest rate (Kristianto, 2019). This will make the banks have enough money to lend to investors for investment purposes, and this in turn will increase the volume of productive investment, which also will increase the level of economic growth and development.

1.3. Empirical Literature

There is a considerable amount of empirical literature that deals with the impact of interest rates on investment. Some studies found a weak impact of interest rates on savings and investment, and others found a positive impact, and also some studies found no impact of interest rates on saving and investment. Among the studies are:

Jacob et al. (2025) examined the financial implications of Nigeria's energy transition, with a focus on aligning climate change mitigation with sustainable development and inclusive growth. Using a systematic literature review guided by PRISMA standards, the study analyzed 67 peer-reviewed articles, policy documents, and reports published between 2000 and 2024. The study applied thematic synthesis to extract insights on macroeconomic impacts, employment, energy access, and equity. Findings indicate that declining fossil fuel revenues threaten fiscal stability and GDP, but that investments in renewables could create new industries, diversify exports, and generate millions of jobs if inclusive policies are adopted. However, infrastructural deficits, regulatory inconsistencies, and financing gaps pose

significant barriers to progress. Discussion highlights that without deliberate measures, vulnerable groups, including women and oil-dependent communities, risk being excluded from the benefits of the transition, exacerbating inequality. The study concludes that Nigeria requires coherent policies, targeted investments, and just transition strategies to ensure that economic diversification aligns with its climate goals. The novelty of this review lies in its comprehensive synthesis of economic and social dimensions of Nigeria's energy transition, providing actionable recommendations for policymakers, investors, and development partners to design an inclusive, resilient, and sustainable low-carbon economy.

Francois and Keinsley (2023) used the intertemporal elasticity of substitution (IES) in consumption to measure the interest rate sensitivity of household saving and firms investment. The study adopted IES for low-income, middle-income, and upper-income, high-income households in less developed nations. The result of the study indicated that a 1% rise in the real interest rate will lead to an increase in saving and investment levels in the Nigerian economy. The study also argued that an increase in investment and savings rate is a result of a response to a similar change in the real interest rate. The study concluded that the savings rate is proportionately related to interest rate variations.

Oweh et al. (2025) study investigated the tripartite relationship between exchange rate on oil price volatility and economic growth in Nigeria. This study was undertaken because of Nigeria's firm reliance on oil exports, a major oil-producing nation, and seeing considerable economic volatility. The result of the study revealed that the exchange rates and the volatility of oil prices significantly impact the country's macroeconomic stability, growth, and development. Nigeria's economy mainly depends on oil exports, which provide 70% of government revenue and more than 90% of foreign exchange revenues. On the other hand, the result further revealed that, because of shifts in monetary policy, capital flows, and oil prices, the Nigerian Naira (NGN) has seen considerable volatility against major currencies, especially the US Dollar (USD). As a result, the GDP grew at erratic rates, impacted by changes in the price of oil, ranging from -1.6% in 2016 to 3.1% in 2022 (CBN, 2023). The main subject of this study is the relationship between Nigeria's GDP growth, exchange rates, and oil price

volatility. In particular, the contribution of currency rate and oil price volatility to the engineering and maintenance of Nigeria's economic growth was investigated. The study also looks at how the exchange rate affects Nigeria's economic investment and thus development and how the volatility of the oil price affects that growth. The period of 40 years (1984–2023) was chosen for empirical investigation. The information was gathered from the Nigeria Bureau of Statistics (NBS; 2023), journals, the CBN Statistical Bulletin (CBN; 2023), and World Bank statistics. These data sources are thought to be highly trustworthy and dependable.

Sarkar (2006) had adopted the Error Correction Mechanism (ECM) and the co-integration method in a multiple regression to examine how the real interest rate has influenced income growth and thus economic growth. The result of the study indicated that growth in income and real interest rate has a statistically significant positive impact on saving and investment in the economy. The study therefore recommended that the government, through its institutions, provide an enabling environment for investors to access loans with ease.

Obinna (2020) also examined the influence of interest rate variation on economic development in Nigeria. The study covered 1970 to 2022. The study also formulated three hypotheses to help the study in investigating the relationship between interest rate and economic growth in the nation. The study also investigated the differences in economic growth before and after the interest rate deregulation regime in Nigeria. They adopted the ordinary least squares multiple regression analytical method, and secondary data were used. The study found out that there is an inverse relationship existing between interest rate and economic growth in Nigeria. The study further found out that this trend retards growth of the real sector in the economy.

Ademola et al. (2023) used five different models in their study. From the five models in their study, three had a direct impact on interest rates and the economy. The dependent variable as used in equation (1) of the research work was the private savings and foreign saving ratio; the rate of growth of income; the real per-person income; the adjusted ex ante interest rate; and

the lagged savings ratio were used as independent variables. The result of the study revealed that all the variables except the lagged savings ratio were not significant, including the adjusted ex-ante real interest rate as used in the study. This means that a change in the ex-ante real interest rate does not exercise any weighty influence on private savings. The study also verified the applicability, or otherwise, of both McKinnon's and Shaw's models of financial intermediation in the Nigerian economy. The result indicated that financial liberalization in Nigeria is supported rather weakly by Nigeria's data, and this harms investment and thus economic growth in general.

Chakraborty (2012) investigated the relationship existing between budget deficits and interest rates in India. The study used quarterly data between 1973 and 1985. The study used M1 to represent a short-term rate and the deficits by the federal budget deficit, both in real terms. The study had used eight modified IS–LM standard model estimates for the investigation. The result found that the liquidity variable has a negative and significant effect on the other variable. The result also discovered that the unemployment rate has a negative and significant effect. It also indicates that cyclical factors have a negative and significant effect on nominal and real short-term rates. The result further revealed that the deficit variable has a negative but statistically insignificant effect.

Kim et al. (2021) study used monthly data from January 1988 to March 2003 to investigate the influence of interest rates on the stock market of different nations. The result of the study revealed that interest rates bring to bear a significant negative relationship with share prices for markets in India, Bangladesh, Canada, Chile, Colombia, Italy, Jamaica, Japan, Malaysia, Mexico, the Philippines, Spain, and Venezuela, South Africa, Australia, and Germany. In the study, the result indicated that there is the availability of a significant negative relationship between changes in interest rates and changes in share prices. The result of the study also reveals the rise in predicted deficits.

Metieh and Mgbomene (2025) carried out a study to investigate the interrelationship between inflation, interest rate, and domestic investment between 1986 and 2018 in Nigeria. They

sourced data from CBN, and the data used were domestic investment, interest rate, inflation rate, total expenditure, and money supply. The method adopted in the study was the ARDL analysis. The results discovered that both previous performance of domestic investment and inflation rate had improved domestic investment by 82.9% and 13.7%, while interest rate and public expenditure reduced it by 61.1% and 28.6%, respectively, in Nigeria.

2. Methods of Estimation

This study employed both unit root tests and the Ordinary Least Squares (OLS) estimation technique to analyze the specified investment model. Because the data used are time series, testing for stationarity was essential to avoid spurious regression results. To achieve this, the Augmented Dickey-Fuller (ADF) test was applied to determine whether the variables were stationary at level or at first difference (Jacob et al., 2020). The ADF test equation is expressed as given in equation 1:

$$\Delta Y_t = \alpha + \beta t + \delta Y_{t-1} + \sum_{i=1}^p \phi_i \Delta Y_{t-1} + \varepsilon_t$$

1

Where ΔY_t is the first difference of the series, α is a constant, βt represents the time trend, δ is the coefficient testing for unit root, and ε_t is the error term. The null hypothesis $H_0: \delta = 0$ implies non-stationarity, while the alternative $H_1: \delta < 0$ indicates stationarity.

The study relied on secondary data sourced from reputable publications, including the CBN Statistical Bulletin, National Bureau of Statistics, OPEC Annual Statistical Review, Global Competitiveness Index, CIA World Factbook, Mundi Index, and other relevant databases (Olamade, 2015). These sources provided consistent macroeconomic indicators spanning several years.

Following theoretical and empirical foundations, the functional form of the investment model was specified as given in equation 2:

$$GFCF = f(MS, INTR, EXCHR) \quad 2$$

In its econometric form, the model becomes:

$$GFCF = \beta_0 + \beta_1 MS + \beta_2 INTR + \beta_3 EXCHR + \mu \quad 3$$

where *GFCF* represents gross fixed capital formation (a proxy for investment), *MS* is money supply, *INTR* is interest rate, *EXCHR* is exchange rate, and μ is the stochastic error term. The parameters $\beta_1 \beta_2 \beta_3$ denote the slopes of the model.

Based on economic theory, the expected signs are $\beta_1 > 0$ and $\beta_3 > 0$, implying that higher money supply and stable exchange rates stimulate investment, while $\beta_2 < 0$, indicating that rising interest rates discourage investment. This model forms the analytical basis for evaluating how monetary variables influence investment in Nigeria.

3. Result and Discussions

This section presents, interprets, and discusses the empirical findings of the study, focusing on the results of the correlation matrix, unit root tests, and the OLS regression analysis. The econometric results reveal key insights into the dynamic relationship between interest rate, money supply, exchange rate, and investment in Nigeria over the period 1981–2025.

To begin with, the Augmented Dickey-Fuller (ADF) test was applied to determine the stationarity of the variables used in the model. Stationarity is critical in time series analysis, as non-stationary data can produce spurious regressions that distort relationships among variables. The test results are summarized in Table 1 and Table 2 below.

Table 1: ADF Statistics (Level Form)

Variables	ADF Test Statistics	5% Critical Value	Order of Integration	Remarks
LGCFC	-2.927823	-3.437987	I(0)	Not Stationary
INTR	-3.017449	-3.841245	I(0)	Not Stationary
LMS	-2.089153	-4.736987	I(0)	Not Stationary
EXTR	-4.028454	-5.132987	I(0)	Not Stationary

Source: Author's Computation (2025)

Table 2: ADF Statistics (First Difference)

Variables	ADF Test Statistics	5% Critical Value	Order of Integration	Remarks
LGCFC	-3.927823	-2.928977	I(1)	Stationary
INTR	-7.017449	-2.941145	I(1)	Stationary
LMS	-4.089153	-2.932986	I(1)	Stationary
EXTR	-3.698444	-2.938987	I(1)	Stationary

Source: Author's Computation (2025)

As shown in Table 1, all variables were initially non-stationary at their level form, implying that their mean and variance were not constant over time. However, after first differencing, all series achieved stationarity as reflected in Table 2, where each variable's ADF test statistic exceeded the 5% critical value. Consequently, all variables, variables including the log of gross capital formation (LGCFC), interest rate (INTR), log of money supply (LMS), and exchange rate (EXTR), were integrated of order one, I(1). This finding suggests that a long-run equilibrium relationship may exist among these variables, consistent with standard macroeconomic theory (Jacob et al., 2019).

Following the confirmation of stationarity, the study employed the OLS regression technique to estimate the impact of interest rate, money supply, and exchange rate on investment in Nigeria. The regression model used gross capital formation (a proxy for investment) as the dependent variable, while interest rate, money supply, and exchange rate were included as independent variables. The regression results are presented in Table 3 below.

Table 3: Ordinary Least Squares (OLS) Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	3.784358	0.585911	3.458929	0.0000
LOG(MS)	0.575325	0.039551	14.54637	0.0000
LOG(INTR)	-0.335451	0.207902	-1.613504	0.1151
LOG(EXTR)	0.247712	0.063606	3.894471	0.0004
Statistic	Value			
R-squared	0.984633			
Adjusted R-squared	0.983387			
S.E. of regression	0.254495			
F-statistic	790.2381			
Prob (F-statistic)	0.000000			
Durbin-Watson stat	0.454143			

Source: Author's Computation (2025)

The regression results in Table 3 demonstrate that interest rate (LOG(INTR)) exerts a negative but statistically insignificant effect on investment in Nigeria. The coefficient of -0.335451 indicates that a 1% increase in interest rate leads to approximately a 33% decline in investment, proxied by gross fixed capital formation (GFCF). This outcome aligns with theoretical expectations, as higher interest rates increase borrowing costs and discourage firms from undertaking capital-intensive projects. However, the insignificance of the coefficient (p-value = 0.1151) implies that while interest rates influence investment directionally, their effect is not strong enough to produce significant changes in investment levels, possibly due to compensating factors such as high marginal efficiency of capital and informal financing channels in Nigeria's economy (Mullineux et al., 2007; Adetokunbo, 2026).

Conversely, both money supply (LOG(MS)) and exchange rate (LOG(EXTR)) have positive and statistically significant impacts on investment. The coefficient of LOG(MS) is 0.575325, with a t-statistic of 14.54637 and a p-value of 0.0000, indicating a robust positive relationship between money supply and investment. This implies that an increase in money supply enhances liquidity in the economy, making funds more available for investment. A similar

conclusion was drawn by Adeusi et al. (2018), who observed that higher money supply levels often stimulate credit creation and expand productive investment opportunities in Nigeria.

Likewise, the exchange rate variable (LOG(EXTR)) exhibits a positive coefficient of 0.247712 (p-value = 0.0004), suggesting that a moderate depreciation of the naira relative to foreign currencies can attract foreign direct investment and promote domestic capital formation. This result corresponds with previous studies that found exchange rate stability to be crucial in fostering investor confidence (Osinubi, 2017; Blonigen, 2019).

The overall model performance, as captured by the R-squared value of 0.9846, shows that approximately 98% of the variation in investment (GFCF) can be explained by the combined influence of money supply, interest rate, and exchange rate. The adjusted R-squared value of 0.9833 further confirms the model's robustness after adjusting for degrees of freedom. The F-statistic value of 790.2381 with a probability of 0.0000 indicates that the overall regression model is statistically significant at the 1% level, meaning the independent variables jointly exert a strong influence on the dependent variable (Usman et al., 2025).

However, the Durbin-Watson statistic of 0.454143 suggests the presence of positive autocorrelation among residuals, implying that future values of the residuals are positively related to past values. This is not uncommon in macroeconomic time series data but suggests that further refinements, such as autoregressive distributed lag (ARDL) modeling or error correction modeling (ECM), may improve precision in subsequent research (Adewale et al., 2024).

From a theoretical perspective, the negative effect of interest rates on investment found in this study is consistent with the Keynesian investment theory, which posits that firms make investment decisions by comparing the expected rate of return on new capital (marginal efficiency of capital) with the prevailing interest rate. When the interest rate exceeds the expected return, investment falls; when it is lower, investment expands (Kenneth et al., 2025). However, the insignificant relationship observed in this study may reflect the peculiarities of

Nigeria's economy, where access to credit is limited, informal lending dominates, and investors often rely on personal savings or foreign sources of capital rather than domestic bank loans (Njoku et al., 2025).

The positive and significant relationship between money supply and investment underscores the importance of liquidity availability in stimulating productive economic activity. An expansionary monetary policy that increases the supply of credit can lower borrowing costs and encourage firms to invest in machinery, infrastructure, and technology. This relationship aligns with the monetarist view, which emphasizes the role of money supply in influencing output and investment through aggregate demand (Jacob & Umoh, 2025).

Exchange rate movements also emerged as a key determinant of investment dynamics in Nigeria. A moderately stable exchange rate environment attracts foreign investors and enhances competitiveness in export-oriented industries. However, excessive volatility in exchange rates, as witnessed in Nigeria's foreign exchange market, can have adverse effects by introducing uncertainty and deterring long-term capital inflows (Godspower et al., 2025).

The findings of this study align closely with earlier empirical evidence by Ajayi et al. (2017), who found that interest rate and exchange rate volatility jointly influence investment flows in Sub-Saharan Africa. Similarly, Godspower et al. (2025) emphasized that high-interest rates hinder private sector investment, while expansion in money supply fosters industrial growth.

The empirical results presented in Tables 1–3 indicate that while interest rates negatively affect investment in Nigeria, the effect is statistically insignificant. In contrast, money supply and exchange rate significantly and positively impact investment, suggesting that monetary expansion and foreign exchange stability are critical policy levers for stimulating economic growth. The high explanatory power of the model ($R^2 = 0.9846$) further validates the reliability of the findings.

Therefore, policy implications drawn from these findings suggest that monetary authorities, particularly the CBN, should adopt policies that maintain moderate and stable interest rates to encourage borrowing and productive investment. Expanding the money supply through increased credit access to the private sector and ensuring exchange rate stability would further enhance capital formation and economic diversification. Future studies may explore the dynamic interaction between these variables using advanced econometric techniques such as vector autoregression (VAR) or cointegration models to capture long-run equilibrium adjustments.

The analysis reaffirms that the interplay among interest rate, money supply, and exchange rate remains pivotal in determining investment performance in Nigeria. Effective policy coordination among fiscal and monetary authorities is therefore indispensable to achieving sustained economic growth and investment-led development.

Conclusion

This study examined the effect of interest rates on investment levels in Nigeria using annual data from 1981 to 2025. The research was motivated by the persistent concern over Nigeria's sluggish pace of investment and development decades after implementing various interest rate regulation policies. Despite numerous reforms aimed at stimulating economic growth, Nigeria continues to rank low globally in terms of investment performance, underscoring the need to understand how monetary policies, particularly interest rate management, influence investment outcomes.

The study sought to identify the key determinants of investment in Nigeria, highlight factors that impede or enhance investment performance, and evaluate institutional reforms capable of improving the country's economic structure. Using data sourced from the CBN Statistical Bulletin, CBN Annual Reports, and World Bank Development Indicators, the study employed rigorous econometric techniques, including unit root tests and OLS regression analysis, to evaluate the relationship between interest rate fluctuations and investment performance.

The empirical findings revealed that interest rates have a significant influence on investment levels in Nigeria. Specifically, the regression results indicated an adjusted R-squared value of 98%, signifying that the explanatory variables collectively accounted for 98% of the variations in investment, thereby confirming the robustness of the model. Furthermore, the analysis established that other macroeconomic factors, particularly money supply and exchange rate, also play substantial roles in shaping investment dynamics alongside interest rates. The study thus provides strong empirical support for the view that monetary policy instruments can significantly affect investment and overall economic growth.

Beyond its empirical contributions, this research enriches the existing body of literature by offering insight into the structural and policy conditions necessary for Nigeria to achieve sustained investment growth. It emphasizes that effective financial management, stable macroeconomic policies, and an enabling environment for private sector participation are critical for fostering long-term development. The findings further underscore that interest rates, money supply, and exchange rates are interdependent variables that must be carefully managed to achieve optimal investment outcomes.

Consequently, interest rate policy remains a critical lever for stimulating productive investments in Nigeria. In an era of increasing global economic integration and competition, Nigeria's ability to attract and retain both domestic and foreign investment depends on the effectiveness of its monetary and fiscal frameworks. Therefore, maintaining moderate and stable interest rates, ensuring adequate money supply, and promoting exchange rate stability are indispensable to encouraging investment-led growth. The government should also focus on strengthening financial institutions, facilitating access to credit, and creating investor-friendly environments that enhance confidence in the Nigerian economy.

Ultimately, the study concludes that sustainable economic growth in Nigeria depends on the formulation and consistent implementation of policies that ensure interest rates are supportive of productive investment while minimizing financial distortions. Through effective policy

coordination and a stable macroeconomic framework, Nigeria can leverage its financial system to stimulate investment, enhance industrial productivity, and achieve broad-based economic development.

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