



Exchange Rate Fluctuations, Institutional Quality and Foreign Direct Investment in Nigeria

Akintola, Francis A., Ogbemor Peter I. and Fatade, Fisayo A

1. Department of Finance, School of Management Sciences, Babcock University

Abstract: Foreign Direct Investment (FDI) remains a critical source of foreign exchange earnings and economic growth in Nigeria. Despite various policy initiatives by the Federal Government and the Central Bank of Nigeria (CBN) to stabilize the Naira against major global currencies, as well as the efforts of the Economic and Financial Crimes Commission (EFCC) to curb corruption, FDI have remained volatile. This persistent instability has raised concerns about the potential influence of exchange rate fluctuations and weak institutional quality on FDI performance in the country. This study therefore examined the effect of exchange rate fluctuations and institutional quality on foreign direct investment in Nigeria between 1996 and 2024. This study employed ex post facto research design to examine the effect of exchange rate fluctuations and institutional quality on foreign direct investment in Nigeria. Time series secondary data were obtained from CBN statistical bulletin. Descriptive and inferential (multiple regression and granger causality) statistics at 5 per cent level of significance. Empirical findings revealed that exchange rate fluctuations and institutional quality jointly exert a significant negative effect on FDI (Adj. $R^2 = 0.80$; $F(6,29) = 19.04$; $p < 0.05$). Specifically, exchange rate fluctuations showed a negative but insignificant impact on FDI ($\alpha_1 = -0.00$, $t = -1.83$, $p > 0.05$), while institutional quality exhibited a negative and significant influence ($\alpha_2 = -0.07$, $t = -3.01$, $p < 0.05$). The combined exchange rate fluctuations and institutional quality also had negative and significant effect on FDI ($\alpha_3 = -0.00$, $t = -3.25$, $p < 0.05$). The study concluded that both exchange rate fluctuations and weak institutional quality significantly affect the foreign direct investments in Nigeria. It recommended the implementation of credible exchange rate management strategies and institutional reforms that promote transparency, accountability, and the rule of law to foster a more stable and investment-friendly environment.

Keywords: Foreign Direct Investment (FDI), Exchange Rate Fluctuations, Multiple Regression, Institutional Quality, Governance, Economic Stability, Nigeria.

INTRODUCTION

Foreign Direct Investment (FDI) has continued to play a pivotal role in driving economic growth, facilitating technological transfer, and deepening global economic integration. In recent years, global FDI flows have demonstrated a modest recovery, reaching approximately \$1.3 trillion in 2023; however, this level remains below pre-pandemic benchmarks (UNCTAD, 2023). Notwithstanding its global significance, the distribution of FDI remains highly skewed, with developed economies accounting for over 70% of total inflows, while Africa captures only a marginal share (UNCTAD, 2023). Empirical literature consistently highlights that FDI contributes to productivity growth, capital accumulation, and innovation, although these benefits are largely contingent on domestic economic and institutional conditions (Alfaro et al., 2020). For developing economies, FDI is particularly important due to limited domestic savings, serving as an alternative source of investment

financing and economic expansion (World Bank, 2023). Beyond capital inflows, FDI enhances managerial capabilities, promotes technology diffusion, and integrates host economies into global value chains (OECD, 2022; UNCTAD, 2023). These channels further stimulate employment generation, export diversification, and efficiency gains (Borensztein et al., 1998), while also fostering competition and productivity spillovers through linkages with domestic firms (Blomström & Kokko, 1998). Consequently, many governments implement investment promotion policies, including fiscal incentives, regulatory reforms, and infrastructure development, to attract foreign investors (World Bank, 2023).

The dynamics of FDI inflows are increasingly influenced by macroeconomic stability, particularly exchange rate movements. Exchange rate fluctuations affect both the cost structure and expected profitability of foreign investments, thereby shaping investor decisions (UNCTAD, 2023). A stable exchange rate regime reduces uncertainty and enhances investor confidence, particularly in relation to profit repatriation (Chakrabarti, 2021). Conversely, exchange rate volatility introduces risk and discourages long-term investment commitments. However, theoretical and empirical debates persist regarding the direction of this relationship. The currency depreciation hypothesis posits that a weaker domestic currency can attract FDI by reducing the relative cost of domestic assets (Asamoah et al., 2022), while the exchange rate uncertainty hypothesis suggests that volatility deters investment due to increased unpredictability (Rashid & Lin, 2018). Recent global trends indicate heightened exchange rate volatility in emerging markets, driven by monetary tightening and capital flow reversals (IMF, 2023). Empirical findings remain inconclusive, suggesting that the exchange rate-FDI nexus is context-specific and often mediated by sectoral characteristics and institutional frameworks (Adewale et al., 2024).

In addition to macroeconomic factors, institutional quality has emerged as a critical determinant of FDI inflows. Strong institutions—characterized by effective governance, regulatory efficiency, rule of law, and control of corruption—reduce transaction costs and provide a predictable business environment for investors (North, 2020; Globerman & Shapiro, 2002). Countries with robust institutional frameworks tend to attract more stable and diversified FDI inflows (World Bank, 2023). Nonetheless, the relationship between institutional quality and FDI is not without debate. While the institutional quality hypothesis underscores the necessity of strong governance structures, the resource-seeking FDI perspective argues that multinational corporations may still invest in countries with weak institutions if natural resource endowments are sufficiently attractive (Asiedu, 2006).

From a global and regional perspective, developed economies such as the United States and countries within the European Union continue to dominate FDI inflows due to their stable macroeconomic environments and strong institutional frameworks. For instance, the United States attracted over \$400 billion in FDI in 2023, supported by stable exchange rate systems and effective governance (U.S. Department of Commerce, 2023), while the European Union benefits from the stability of the eurozone and an integrated market system (European Commission, 2022). In contrast, Africa accounted for only about 3.5% of global FDI inflows in 2023, despite its vast resource potential (UNCTAD, 2023). Structural challenges—including exchange rate instability, weak institutional quality, and political risks—continue to limit the region's attractiveness to foreign investors (AfDB, 2023). Within Sub-Saharan Africa, countries such as Rwanda, Botswana, and Mauritius have achieved relatively higher FDI inflows due to stronger institutional frameworks (World Bank, 2023), whereas many others remain vulnerable to external shocks, including commodity

price fluctuations and global interest rate changes, which exacerbate exchange rate volatility (IMF, 2023). In West Africa, although countries like Ghana and Côte d'Ivoire have recorded improvements through policy reforms and macroeconomic stability, Nigeria continues to face persistent challenges associated with exchange rate misalignment and institutional weaknesses (Ezeani & Okonkwo, 2024).

Nigeria, as the largest economy in Africa, presents a compelling case for examining the interplay between exchange rate fluctuations, institutional quality, and FDI inflows. Historically, the country has attracted significant FDI, particularly in the oil and gas sector; however, recent trends reveal a substantial decline. FDI inflows decreased from approximately \$3.3 billion in 2019 to \$2.4 billion in 2020, and further declined to \$698 million in 2021 and \$468 million in 2022 (UNCTAD, 2021; UNCTAD, 2023; CBN, 2023). Although there was a modest recovery to about \$1.0-1.1 billion in 2023, inflows remain significantly below historical levels (UNCTAD, 2024). This downward trend is largely attributed to exchange rate instability and weak institutional frameworks. Between 2020 and 2023, the naira depreciated by over 60% against the U.S. dollar, increasing uncertainty and reducing investment returns (Ezeani & Okonkwo, 2024). Nigeria's exchange rate system—characterized by multiple exchange rates, frequent currency adjustments, and foreign exchange constraints—poses significant challenges for investors, particularly in terms of profit repatriation.

Institutional quality further compounds these challenges. Nigeria's performance in global governance and business environment indicators remains weak. The country ranked 131 out of 190 economies in the Ease of Doing Business Report, with poor performance in areas such as contract enforcement, property registration, and construction permits (World Bank, 2020). Governance indicators also reveal low scores in control of corruption, rule of law, and regulatory quality (World Bank, 2023). Similarly, Nigeria scored 25 out of 100 on the Corruption Perceptions Index, ranking 145th globally (Transparency International, 2024). These institutional deficiencies increase operational costs, heighten risks, and discourage long-term investment. Although policy initiatives such as the National Development Plan (2021-2025), reforms by the Nigerian Investment Promotion Commission, and efforts of the Presidential Enabling Business Environment Council have been introduced to improve the investment climate, their impact has been limited due to persistent bureaucratic inefficiencies and policy inconsistencies (World Bank, 2023; AfDB, 2023).

Despite the extensive literature on FDI determinants, a critical gap remains in understanding the joint effects of exchange rate fluctuations and institutional quality. Most existing studies analyze these factors in isolation, with limited attention to their interaction. Emerging evidence suggests that institutional quality may moderate the impact of exchange rate volatility on FDI inflows (Farah, 2025), yet this relationship remains underexplored, particularly in the Nigerian context. This study is therefore motivated by the persistent volatility and decline in FDI inflows in Nigeria, coupled with ongoing exchange rate instability and weak institutional frameworks. Notably, institutional quality not only directly influences investment decisions but also shapes how macroeconomic instability affects investor behavior (Nguyen & Kim, 2022). Strong institutions can mitigate the adverse effects of exchange rate volatility, while weak institutions may amplify them.

In line with Nigeria's development priorities under the National Development Plan (2021-2025), which emphasizes the importance of foreign investment for sustainable economic growth, this study makes a significant contribution to both empirical literature

and policy discourse. Specifically, it examines the interaction between exchange rate fluctuations and institutional quality in determining FDI inflows. By doing so, the study provides a more comprehensive understanding of the investment climate in Nigeria and offers policy-relevant insights for enhancing macroeconomic stability, strengthening institutional frameworks, and ultimately restoring investor confidence.

REVIEW OF RELATED LITERATURE

Foreign Direct Investment

Foreign Direct Investment (FDI) refers to cross-border investment through which an individual or firm acquires a lasting interest and significant managerial control in an enterprise located in another country, typically defined by ownership of at least 10 percent of voting power (UNCTAD, 2023). Unlike portfolio investment, FDI involves long-term commitments characterized by managerial participation, technology transfer, and operational involvement, commonly occurring through mergers and acquisitions, joint ventures, reinvested earnings, or greenfield investments (OECD, 2022).

FDI constitutes a critical component of globalization and economic integration, particularly in developing economies where domestic savings and capital formation are often insufficient to support development needs (World Bank, 2023). Beyond providing capital inflows, FDI contributes to technological transfer, managerial skill development, productivity improvement, and integration into global production networks, often resulting in employment generation and export diversification (Borensztein et al., 1998; OECD, 2022; UNCTAD, 2023). The presence of multinational enterprises can also stimulate competition and innovation in domestic markets through spillover effects such as labor mobility and supplier linkages (Blomström & Kokko, 1998).

Exchange Rate

The exchange rate, defined as the price at which one currency is exchanged for another, serves as a critical link between domestic economies and global trade and financial systems. Exchange rate movements significantly influence international competitiveness, capital flows, and foreign investment decisions by affecting production costs, expected profitability, and the value of repatriated earnings (Brooks, 2019). A stable and predictable exchange rate environment reduces currency risk and enhances investor confidence, thereby supporting sustained foreign direct investment (FDI) inflows (IMF, 2022).

Institutional Quality

Institutional quality refers to the effectiveness and credibility of governance structures—including rule of law, regulatory quality, government effectiveness, control of corruption, political stability, and accountability mechanisms—in shaping an enabling environment for economic activity and investment (North, 1990; Kaufmann et al., 2022). Strong institutions enhance policy credibility, reduce transaction costs, and protect property and investor rights, thereby promoting both domestic and foreign investment and supporting long-term economic performance (World Bank, 2023). Theoretical and empirical literature consistently

identifies institutional quality as a key determinant of foreign direct investment (FDI). Within Dunning's OLI paradigm, location advantages influencing multinational investment decisions are strongly conditioned by institutional environments. Countries with transparent regulatory systems, reliable contract enforcement, and predictable policy frameworks attract higher levels of FDI by reducing operational uncertainty and transaction costs (Globerman & Shapiro, 2020; OECD, 2022). Conversely, weak institutional environments characterized by corruption, bureaucratic inefficiencies, and policy inconsistency discourage investment by increasing business risks and operational costs (World Bank, 2023; UNCTAD, 2022).

Theoretical Review: Currency Area Theory

Currency Area Theory, also known as the Optimum Currency Area (OCA) Theory, was introduced by Mundell (1961) to explain the conditions under which countries benefit from adopting a common currency or maintaining fixed exchange rate systems, emphasizing assumptions such as high labor and capital mobility, price and wage flexibility, synchronized business cycles, and fiscal integration to manage asymmetric shocks and enhance economic efficiency. The theory was further developed by McKinnon (1963), who stressed the importance of economic openness, and Kenen (1969), who highlighted the stabilizing role of fiscal transfers, while its practical relevance is evident in the formation of the Eurozone and later refinements by De Grauwe (2018), who examined its applicability under modern financial and institutional conditions. However, despite its widespread influence, the theory has been criticized for being overly idealistic, as few regions fully meet its criteria, with the Eurozone crisis exposing weaknesses related to lack of fiscal union, unsynchronized economic cycles, and insufficient institutional capacity, alongside its limited consideration of political commitment and structural diversity. Nevertheless, the theory remains relevant to this study as it provides a useful framework for understanding how exchange rate stability influences international trade and investment, particularly in Nigeria where, despite not being part of a currency union, exchange rate policies significantly affect trade finance operations and investment decisions, and where ongoing regional initiatives such as the proposed Eco currency underscore the importance of minimizing currency volatility to enhance competitiveness and cross-border trade within West Africa.

Empirical Review

Nwangene and Akamobi (2024) examined the impact of exchange rate volatility on Nigeria's growth, inflation, and unemployment from 1981 to 2021 using the FGLS method. Results indicated that volatility reduced growth, heightened inflation, and worsened unemployment. While insightful, the study did not address FDI, which is the focus of the current research.

Ayoola (2024) investigated macroeconomic instability and FDI in Nigeria, highlighting multinational exits such as GlaxoSmithKline, Kimberly-Clark, and Procter & Gamble between 2013 and 2022. Using a mixed-methods approach, the study identified exchange rate volatility as a key factor undermining investor confidence and driving FDI outflows. It stressed the importance of stable exchange rate management in attracting and retaining investment. Agoh et al. (2024) analyzed exchange rate movements and foreign portfolio

investment (FPI) in Nigeria using EGARCH models with monthly data from 2022. The study found that volatility had lasting effects on stock prices and FPI, reinforcing the importance of stable exchange rate policies. However, its focus on portfolio investment leaves a gap in understanding exchange rate impacts on FDI.

Judijanto and Ekowati (2024) conducted a bibliometric analysis of global trade and exchange rate policies, synthesizing literature on volatility and trade dynamics. The study highlighted the importance of exchange rate management in ensuring economic stability. Nonetheless, it did not directly address the exchange rate-FDI nexus, which remains the focus of the present study. Leong et al. (2024) examined the impact of monetary policy dynamics on FDI in Malaysia, using ARDL models to analyze data from 1993 to 2022. The study finds that exchange rate, real interest rate, and trade openness negatively affect FDI, indicating the complexity of factors influencing FDI. While the study provides insights into how exchange rate dynamics interact with other factors in attracting FDI, it is focused on Malaysia, making its direct applicability to Nigeria's context limited. Nonetheless, the study highlights important issues regarding exchange rate management that are pertinent to the current research on Nigeria.

Dai (2024) investigated the information content of FDI in Vietnam by examining the difference between registered and disbursed FDI from 2007 to 2023. The study finds that disbursed FDI is more connected to macroeconomic fundamentals, while registered FDI is better at forecasting future economic variables. While the study contributes valuable insights into the role of FDI in economic planning, its focus on Vietnam limits its direct relevance to the Nigerian context, where exchange rate management remains a key factor in attracting and sustaining FDI, a focus of the current study. Meraj et al. (2024) examined the impact of exchange rate fluctuations on Pakistan's economy, focusing on GDP growth, inflation, FDI, and trade balances using correlation and regression analysis. The study found that volatility significantly affected growth, export competitiveness, and trade balances. However, it did not fully explore how exchange rate management could attract FDI, leaving a gap relevant to the Nigerian context.

Ullah and Nobanee (2025) analyzed the interaction between exchange rates, financial, and energy dynamics in Pakistan and other emerging economies using the ARDL Bounds Test. They found that FDI strengthened exchange rate stability, while energy prices, inflation, and remittances influenced volatility. Although the study highlighted FDI's stabilizing role, it did not address exchange rate policy as a tool for fostering investment, which is central to the current research. Okoli and Ogochukwu (2025) investigated the effect of exchange rate movements on FDI in Nigeria from 1990 to 2024 using the ARDL model. Results showed that exchange rate fluctuations significantly shaped FDI, while gross national income boosted investor confidence. Interest rates were insignificant, and exports and imports had mixed effects, reflecting the complexity of Nigeria's trade-investment relationship.

METHODOLOGY

Research Design

The study adopted an ex-post facto research design to investigate the impact of exchange rate fluctuations and institutional quality on foreign direct investment in Nigeria. The

research utilized secondary historical data, and statistical analyses were conducted to examine the relationships among the study variables without any manipulation or control of the variables, consistent with the requirements of ex-post facto research design. The study utilized secondary data sourced from reputable institutions, including the World Bank, the International Monetary Fund (IMF), and the Central Bank of Nigeria (CBN), which provided publicly available economic indicators and macro-financial data required for the analysis. The study employed annual time series data covering a continuous period, enabling the analysis of trends and relationships among the variables over time.

Model Specifications

The study adopted the Currency Area Theory proposed by Mundell (1961), which posits that foreign direct investment is more likely to occur within regions characterized by stable or shared currencies, as exchange rate stability reduces uncertainty and transaction costs faced by investors. In addition, the study adapted the empirical model developed by Uguru et al. (2024), with slight modifications to reflect the specific objectives, variables, and contextual realities of the Nigerian economy.

$$FDI_t = \pi_0 + \pi_1 EXR_t + \pi_2 IQ_t + \pi_3 EXR * IQ + \mu_t \dots \dots \dots (1)$$

Where: FDI = Foreign Direct Investment (FDI), EXR = Exchange Rate (EXR), IQ = Institutional Quality (IQ), EXR*IQ = Interaction of Exchange Rate and Institutional Quality (EXR*IQ), t = Regular time interval at which the variables will be considered

Measurement of the Variables Included in the Models.

Table 3.2: Variable, Description, and Measurement and Source

S/N	Variables	Description	Measurement	Sources
1	Foreign direct investment (FDI)	Foreign Direct Investment (FDI) involves a country or company investing in another country's business assets, typically through ownership, management, or lasting interest in enterprises.	Foreign Direct Investment (FDI) as a ratio of Gross Domestic Product (GDP) is measured by dividing total FDI by the country's GDP and expressing the result as a percentage. This ratio indicates the relative size and significance of FDI within the economy, showing how much foreign investment contributes to economic activity. Mathematically: FDI-to-GDP Ratio (%) = $(FDI \div GDP) \times 100$	Central Bank of Nigeria (CBN) Statistical Bulletin
2	Exchange rate (EXR)	Exchange rate is the value at which one country's currency can be exchanged for another, influencing international trade, investment flows, and economic stability.	The annual Naira nominal exchange rate to the Dollar from 1994 to 2024 is measured by averaging the yearly official market rate of ₦ per US\$ for each calendar year.	Central Bank of Nigeria (CBN) Statistical Bulletin

3	Institutional quality (IQ)	Institutional quality refers to the effectiveness of legal, regulatory, and governance structures in promoting transparency, accountability, rule of law, and economic development in a country.	Nigeria's annual institutional quality from 1994 to 2024 is measured using World Governance Indicators, averaging six dimensions like rule of law, control of corruption, and government effectiveness yearly	World Governance Indicators (WGI) and Central Bank of Nigeria (CBN) Statistical Bulletin
4	Interaction of exchange rate and institutional quality (ER*IQ)	The interaction of institutional quality and exchange rate reflects how strong institutions stabilize currency values by fostering investor confidence, reducing uncertainty, and enhancing macroeconomic policy effectiveness and governance	The interaction of Nigeria's annual institutional quality and exchange rate from 1994 to 2024 is measured by multiplying Nigeria's annual institutional quality and exchange rate	World Governance Indicators (WGI) and Central Bank of Nigeria (CBN) Statistical Bulletin

Source: Author's Compilation, 2025

Estimation Techniques

The study employed robust econometric estimation techniques, beginning with pre-estimation tests such as unit root, stationarity, and co-integration analyses to ensure that the time-series data satisfied the assumptions necessary for reliable model estimation and to avoid spurious regression results (Gujarati & Porter, 2020; Brooks, 2019). Specifically, the Augmented Dickey-Fuller (ADF) test was used to confirm the stationarity of variables, while the Johansen co-integration technique established the existence of a long-run equilibrium relationship, justifying the use of the Vector Error Correction Model (VECM) to capture both short-run dynamics and long-run relationships. Furthermore, post-estimation diagnostic tests, including the Breusch-Godfrey test for autocorrelation and the Breusch-Pagan test for heteroscedasticity, were conducted to verify that the model did not violate the assumptions of the classical linear regression framework (Wooldridge, 2020). These procedures enhanced the validity, consistency, and robustness of the estimated coefficients, ensuring reliable statistical inference and improving the overall credibility of the findings.

PRESENTATION AND DISCUSSION OF RESULTS

Descriptive Statistics Result and Discussions

Descriptive statistics reveal moderate variation in foreign direct investment (FDI) inflows over the study period, with a mean value of 1.31 and standard deviation of 0.78, indicating fluctuations but relative stability in investment performance. Exchange rate movements display substantial variability, reflected in a large dispersion and wide range of values, confirming persistent currency instability in Nigeria. Institutional quality shows moderate variation, suggesting gradual improvements alongside periods of governance setbacks.

Remittance inflows and credit to the private sector exhibit relatively stable patterns, consistent with evidence that diaspora inflows remain resilient while financial sector credit has gradually expanded. Normality tests indicate that most variables follow approximately

normal distributions, supporting the suitability of parametric econometric estimation. Overall, the descriptive evidence suggests that exchange rate volatility and institutional conditions are important contextual factors influencing investment outcomes in Nigeria.

Table 1: Descriptive statistics Result and Discussions

Statistics	FDI	ER	INQ	ERNQ	REM	CPS
Mean	1.3107	182.9779	21.7931	4716.208	3.9334	11.0514
Median	1.0900	148.8800	24.0000	3692.640	4.2300	10.6000
Maximum	2.9300	460.4100	28.0000	11965.46	8.3100	19.6200
Minimum	0.0000	21.8800	10.0000	393.8400	0.5600	6.1700
Standard Deviation	0.7849	127.8426	5.0666	3634.238	2.2081	3.3355
Skewness	0.3067	0.8939	-0.7103	0.6921	-0.0941	0.7237
Kurtosis	2.2776	2.8247	2.3862	2.1536	1.9258	3.2448
Jarque-Bera	1.0854	3.8995	2.8937	3.1806	1.4372	2.6040
Probability	0.5812	0.1423	0.2353	0.2039	0.4874	0.2720
Sum	38.0100	5306.360	632.0000	136770.0	114.0700	320.4900
Sum Sq. Dev.	17.2512	457624.2	718.7586	3.70E+08	136.5137	311.5189
Observations	29	29	29	29	29	29

Source: Author's Computation from E-Views, 2025. Note. FDI = Foreign Direct Investment; ER = Exchange Rate; INQ = Institutional Quality; ERNQ = Interaction term (Exchange Rate $\times$ Institutional Quality); REM = Remittances; CPS = Credit to Private Sector.

Correlation Analysis Results and discussions.

The correlation matrix displays the strength and direction of linear relationships among six variables: Foreign Direct Investment (FDI), Exchange Rate (ER), Institutional Quality (INQ), Interaction between Exchange Rate and Institutional Quality (ERNQ), Remittances (REM), and Credit to Private Sector (CPS).

The correlation results indicate that FDI is moderately negatively associated with exchange rate fluctuations, implying that currency instability discourages foreign investment by increasing uncertainty and financial risk. The interaction between exchange rate fluctuations and institutional quality shows an even stronger negative association with FDI, suggesting that macroeconomic instability reinforced by institutional weaknesses exerts greater adverse effects on investment inflows than either factor individually.

Institutional quality alone exhibits a weak negative association with FDI, implying that governance improvements during the study period may not have consistently translated into improved investor confidence. Remittances and private sector credit display weak positive relationships with FDI, suggesting that domestic liquidity and financial development may marginally support investment activity.

The results also show that exchange rate stability is positively associated with institutional quality, indicating that stronger governance frameworks may contribute to improved currency management. Overall, the correlation analysis highlights the importance of macroeconomic and institutional interactions in shaping investment patterns.

Table 2: Correlation Analysis Result

Variables	FDI	ER	INQ	ERNQ	REM	CPS
FDI	1					
ER	-0.509	1				
INQ	-0.238	0.528	1			
ERNQ	-0.554	0.969	0.661	1		
REM	0.286	0.441	0.655	0.477	1	
CPS	0.152	0.435	0.648	0.492	0.581	1

Source: Author's Computation from E-Views, 2025. Note. FDI = Foreign Direct Investment; ER = Exchange Rate; INQ = Institutional Quality; ERNQ = Interaction term (Exchange Rate $\times$ Institutional Quality); REM = Remittances; CPS = Credit to Private Sector.

Stationarity Test Results and Discussions

The Augmented Dickey-Fuller unit root tests reveal that most variables are non-stationary at levels but become stationary after first differencing, indicating integration of order one, $I(1)$. Credit to the private sector, however, is stationary at level, implying integration of order zero, $I(0)$. The mixed order of integration justifies the application of econometric techniques capable of accommodating variables with different integration orders in subsequent estimation.

Table 3: Unit root result

Augmented Dickey Fuller Test Statistics			
Variables	@level	@ first difference	Remarks
FDI	-0.9695	-8.0402	1(1)
ER	1.1385	-4.0207	1(1)
INQ	-1.7464	-5.6046	1(1)
ERNQ	1.1417	-5.5097	1(1)
REM	-2.0847	-5.1088	1(1)
CPS	-3.0316	-	1(0)

Source: Author's Computation from E-Views, 2025

Note. FDI = Foreign Direct Investment; ER = Exchange Rate; INQ = Institutional Quality; ERNQ = Interaction term (Exchange Rate $\times$ Institutional Quality); REM = Remittances; CPS = Credit to Private Sector

Cointegration Analysis Result and Interpretation

The Johansen cointegration tests confirm the presence of two cointegrating relationships among FDI, exchange rate, institutional quality, their interaction, remittances, and private sector credit. Both the trace and maximum eigenvalue statistics consistently reject the null hypothesis of no cointegration at the 5% significance level.

This finding implies the existence of long-run equilibrium relationships among the variables, indicating that although short-term deviations may occur due to policy or external shocks, the variables adjust toward a stable long-run relationship. Consequently,

macroeconomic and institutional factors exert persistent influences on FDI performance in Nigeria.

Table 4.4: Cointegration Analysis Result and Interpretation

Date: 11/06/25 Time: 06:09 Sample (adjusted): 1998 2024 Included observations: 27 after adjustments Trend assumption: Linear deterministic trend Series: FDI ER INQ ERNQ CPS REM Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.844294	132.9802	95.75366	0.0000
At most 1 *	0.760361	82.76586	69.81889	0.0033
At most 2	0.465827	44.19303	47.85613	0.1060
At most 3	0.421197	27.26307	29.79707	0.0954
At most 4	0.298975	12.49965	15.49471	0.1345
At most 5	0.102137	2.908913	3.841465	0.0881
Trace test indicates 2 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.844294	50.21429	40.07757	0.0026
At most 1 *	0.760361	38.57283	33.87687	0.0128
At most 2	0.465827	16.92997	27.58434	0.5860
At most 3	0.421197	14.76342	21.13162	0.3058
At most 4	0.298975	9.590734	14.26460	0.2402
At most 5	0.102137	2.908913	3.841465	0.0881
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				

Source: Author's Computation from E-Views, 2025

Model Evaluation Result and Discussion of Findings

The least squares regression results show that the model explains a substantial portion of the variation in foreign direct investment (FDI) in Nigeria between 1996 and 2024. The R-squared value of 0.805 and adjusted R-squared of 0.763 indicate that approximately 76% of the changes in FDI are explained by the independent variables exchange rate fluctuations (ER), institutional quality (INQ), interaction between exchange rate and institutional quality (ERNQ), remittances (REM), and credit to the private sector (CPS). The F-statistics (19.05) is significant at the 1% level, confirming the overall goodness of fit of the model.

Table 4: Model Evaluation Result and Discussions

Dependent Variable: FDI Method: Least Squares Date: 11/06/25 Time: 06:11 Sample (adjusted): 1996 2024 Included observations: 29 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.731518	0.373795	4.632262	0.0001
ER	-0.001081	0.000590	-1.832665	0.0798
INQ	-0.078094	0.025882	-3.017266	0.0061
ERNQ	-0.000136	4.17E-05	-3.253932	0.0035
REM	0.264541	0.046654	5.670237	0.0000
CPS	0.093099	0.030857	3.017140	0.0061
R-squared	0.805463	Mean dependent var		1.304310
Adjusted R-squared	0.763172	S.D. dependent var		0.790298
S.E. of regression	0.384598	Akaike info criterion		1.108756
Sum squared resid	3.402063	Schwarz criterion		1.391645
Log likelihood	-10.07697	Hannan-Quinn criter.		1.197354
F-statistic	19.04587	Durbin-Watson stat		1.799888
Prob(F-statistic)	0.000000			

Source: Author's Computation from E-Views, 2025

Note. FDI = Foreign Direct Investment; ER = Exchange Rate; INQ = Institutional Quality; ERNQ = Interaction term (Exchange Rate $\times$ Institutional Quality); REM = Remittances; CPS = Credit to Private Sector

The regression results show that exchange rate (ER), institutional quality (INQ), their interaction term (ERNQ), remittances (REM), and credit to the private sector (CPS) jointly explain variations in foreign direct investment (FDI) in Nigeria over the period 1996-2024. The coefficient of determination ($R^2 = 0.805463$) indicates that approximately 80.5% of the variation in FDI is explained by the model, suggesting a strong explanatory power. The F-statistic (19.04587) with a probability value of 0.0000 confirms that the model is statistically significant overall. The Durbin-Watson statistic (1.799888) is close to 2, indicating the absence of serious autocorrelation in the residuals, thus supporting the reliability of the estimates.

Examining the individual coefficients, exchange rate (ER) has a negative and statistically insignificant effect on FDI (coefficient = -0.001081; $p = 0.0798$), implying that exchange rate depreciation tends to reduce FDI inflows, although the effect is weak at the 5% level. Institutional quality (INQ) exhibits a negative and statistically significant relationship with FDI (coefficient = -0.078094; $p = 0.0061$), suggesting that weak institutional structures discourage foreign investment. The interaction term (ERNQ) is also negative and significant (coefficient = -0.000136; $p = 0.0035$), indicating that poor institutional quality amplifies the adverse effect of exchange rate fluctuations on FDI. In contrast, remittances (REM) have a positive and highly significant impact on FDI (coefficient = 0.264541; $p =$

0.0000), reflecting their role in enhancing domestic liquidity and investment attractiveness, while credit to the private sector (CPS) is positive and significant (coefficient = 0.093099; $p = 0.0061$), suggesting that financial sector development supports FDI inflows.

DISCUSSION OF FINDINGS

The empirical findings from this study reveal that exchange rate (ER) exerts a negative but statistically insignificant effect on foreign direct investment (FDI), while institutional quality (INQ) and its interaction with exchange rate (ERNQ) have significant negative effects on FDI inflows in Nigeria. This implies that exchange rate depreciation alone may not be sufficient to significantly deter FDI; however, when combined with weak institutional frameworks, its adverse effect becomes more pronounced. The significant negative coefficient of the interaction term (ERNQ) suggests that poor institutional quality amplifies the uncertainty created by exchange rate fluctuations, thereby discouraging foreign investors. In contrast, remittances (REM) and credit to the private sector (CPS) were found to have positive and statistically significant effects on FDI, indicating that improved financial deepening and external financial inflows enhance investment attractiveness. Overall, the results highlight that macroeconomic instability, when reinforced by weak institutions, undermines Nigeria's ability to attract sustainable foreign investment.

These findings are largely in tandem with several empirical studies reviewed. For instance, the negative impact of exchange rate instability on investment aligns with Ayoola (2024), who identified exchange rate volatility as a major factor driving multinational exits from Nigeria and weakening investor confidence. Similarly, the findings support Okoli and Ogochukwu (2025), who reported that exchange rate fluctuations significantly influence FDI inflows in Nigeria. The results also corroborate the broader macroeconomic instability argument presented by Nwangene and Akamobi (2024) and Agoh et al. (2024), who found that exchange rate volatility adversely affects economic performance and financial flows, although their studies did not directly focus on FDI. Furthermore, the negative relationship between exchange rate and FDI is consistent with Leong et al. (2024), who found similar results in Malaysia, suggesting that unstable macroeconomic conditions discourage foreign investment across different contexts. However, the current study extends these works by incorporating institutional quality, thereby providing deeper insights into how governance structures shape the exchange rate-FDI relationship.

On the other hand, the findings diverge slightly from studies such as Ullah and Nobanee (2025), which emphasized the role of FDI in stabilizing exchange rates rather than the reverse relationship examined in this study. Additionally, while Meraj et al. (2024) found significant macroeconomic effects of exchange rate fluctuations, their limited focus on FDI attraction contrasts with the current study's emphasis on investment inflows. Studies like Judijanto and Ekowati (2024) and Dai (2024), though insightful, did not directly examine the exchange rate-FDI nexus, making them less directly comparable. Importantly, this study fills a critical gap by demonstrating that institutional quality not only directly affects FDI but also moderates the impact of exchange rate fluctuations. This contribution provides a more comprehensive understanding of investment dynamics in Nigeria and underscores the need for coordinated macroeconomic and institutional reforms to enhance investor confidence.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study examined the impact of exchange rate fluctuations and institutional quality on foreign direct investment (FDI) in Nigeria over the period 1996-2024, incorporating remittances and credit to the private sector as control variables. Using the Ordinary Least Squares (OLS) estimation technique alongside relevant diagnostic tests, the study found that exchange rate exerts a negative but statistically insignificant effect on FDI, while institutional quality has a negative and significant impact. Importantly, the interaction between exchange rate and institutional quality was found to be negative and statistically significant, indicating that weak institutions amplify the adverse effects of exchange rate instability on FDI inflows. In contrast, remittances and credit to the private sector exhibited positive and significant relationships with FDI, suggesting that financial deepening and external financial inflows enhance Nigeria's investment attractiveness. Overall, the model demonstrated strong explanatory power, confirming that macroeconomic and institutional factors jointly influence FDI dynamics in Nigeria.

Based on these findings, the study concludes that exchange rate fluctuations alone do not fully explain the decline in FDI inflows into Nigeria; rather, the effectiveness of exchange rate movements in attracting or discouraging investment depends significantly on the quality of institutions. Weak governance structures, regulatory inefficiencies, and policy inconsistencies exacerbate the uncertainty associated with exchange rate volatility, thereby discouraging foreign investors. The study further concludes that improving institutional quality can mitigate the negative effects of macroeconomic instability and create a more conducive environment for foreign investment. Additionally, the positive roles of remittances and financial sector development highlight the importance of broader economic reforms in supporting investment inflows.

In light of these conclusions, the study recommend the following:

Based on the empirical evidence, the study proposes policy measures aimed at strengthening Nigeria's attractiveness to foreign direct investment (FDI) through improvements in macroeconomic stability and institutional effectiveness.

First, exchange rate management should be strengthened to reduce currency volatility and improve investor confidence. Policies that enhance transparency in the foreign exchange market, diversify export earnings, and improve foreign exchange supply are essential for creating a predictable investment environment that minimizes currency risk.

Second, institutional quality requires substantial improvement to address governance weaknesses and regulatory inefficiencies that discourage foreign investors. Priority should be given to reforms that enhance transparency, reduce corruption, strengthen judicial processes, and ensure effective enforcement of property rights. Strengthening the operational independence and capacity of regulatory institutions will further improve investor confidence.

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