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ASSESSING THE EFFECT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH OF NIGERIA: EVIDENCE FROM ARDL APPROACH (1986-2023)

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ABSTRACT

Foreign Direct Investment (FDI) serves as a catalyst for economic growth by facilitating the transfer of technology and capital through financial investments in goods and services. This study empirically examined the effect of foreign direct investment on economic growth of Nigeria for the period 1986-2023 using ARDL model as a tool for analysis. The finding of the study shows that foreign direct investment (FDI) in the long-run impacted positively on economic growth of Nigeria. Although, finding from the short-run estimate revealed a non-significant inverse relationship between foreign direct investment and economic growth, thus indicating that foreign direct investment does not influence the performance of the economy in the short-run. Based on the finding, it is recommended that to fully maximize the positive impact of FDI on economic growth in Nigeria, the government must improve regulations and simplify procedures to attract international investors, while concurrently investing in infrastructure and skills development to help local industry. In addition, establishing partnerships between multinational and domestic businesses can enhance knowledge transfer and capacity development, thereby assuring sustainable economic progress.

Keywords: *Foreign Direct Investment, Exchange Rate, and Economic Growth*
JEL Classification Code: *G11, O43, O47*

1.0 Introduction

Economic growth remains a fundamental objective for developing nations striving to improve living standards, reduce poverty, and enhance overall societal welfare. Sustained economic growth typically measured by increases in gross domestic product (GDP) reflects an expansion of a nation's productive capacity and its potential for wealth creation (Todaro & Smith, 2020). For developing economies such as Nigeria, achieving robust and inclusive growth presents significant challenges due to limited domestic capital formation, technological constraints, and infrastructural deficiencies. These limitations have prompted the exploration of alternative growth drivers, with foreign direct investment (FDI) emerging as a potentially transformative force within economic development discourse.

The endogenous growth theory posits that economic growth is primarily driven by internal factors such as human capital development, innovation, and knowledge accumulation, rather than external inputs (Romer, 1994). However, in capital-constrained economies, external sources of financing like FDI can play a pivotal role in supplementing domestic savings and accelerating growth trajectories (Borensztein et al., 1998). This theoretical framework underscores the potential symbiotic relationship between FDI and economic growth, particularly in resource-constrained environments like Nigeria. According to the World Investment Report published by the United Nations Conference on Trade and Development

(UNCTAD, 2023), FDI reflects a strategic commitment by investors to exert significant influence over the management of enterprises in host countries, establishing a lasting presence rather than merely engaging in passive financial investments. This long-term commitment can potentially catalyze economic growth through various transmission mechanisms, including capital formation, technology transfer, human capital development, and enhanced market efficiency.

Global FDI flows reached approximately $1.3 trillion in 2022, representing a 5% increase from 2021, driven by robust investments in developed economies and a recovery in developing regions (UNCTAD, 2023). Notably, developing economies attracted an estimated $718 billion—accounting for 54% of global inflows. Despite this positive trend, FDI distribution remains uneven across developing regions, with Sub-Saharan Africa receiving disproportionately smaller shares compared to Asia and Latin America (Obadan, 2012). This disparity raises important questions about the determinants of FDI allocation and its varied impacts on economic growth across developing countries.

Nigeria's economic growth trajectory since independence has been marked by significant volatility, characterized by cycles of rapid expansion followed by sharp contractions. Between 2000 and 2020, the country's GDP growth averaged 2.7%, occasionally falling below the population growth rate of approximately 2.6% (World Bank, 2022). This erratic growth pattern has been shaped by various factors, including oil price fluctuations, political instability, infrastructural gaps, and policy inconsistencies, emphasizing the need for more sustainable and resilient growth drivers (Osinubi & Amaghionyeodiwe, 2010).

The introduction of the Structural Adjustment Program (SAP) in 1986 marked a turning point in Nigeria's economic policy, particularly through the liberalization of its investment regime aimed at attracting FDI as a key growth catalyst (Oyegoke & Aras, 2021). Subsequent reforms have reinforced this orientation, including the Nigerian Investment Promotion Commission Act (1995), the Foreign Exchange Monitoring and Miscellaneous Provisions Act (1995), and more recent initiatives such as the Economic Recovery and Growth Plan (ERGP) 2017–2020. These policies have yielded mixed outcomes, with FDI inflows peaking at $8.9 billion in 2011 but declining to $3.3 billion by 2021 (UNCTAD, 2022).

Multinational corporations have made substantial investments in Nigeria, particularly in sectors such as oil and gas (e.g., Shell, Chevron), telecommunications (e.g., MTN, Airtel), and manufacturing. However, the extent to which these investments have translated into broad-based economic growth remains debatable. While some studies report positive associations between FDI and economic growth in Nigeria (Adeleke, 2014; Olokoyo, 2012), others suggest negligible or even negative effects depending on contextual factors and time horizons (Akinlo, 2004; Obalade & Obisesan, 2015).

This inconsistency in empirical findings points to a significant research gap regarding the temporal dynamics and contextual conditions that mediate the FDI–growth relationship in Nigeria. Many existing studies rely on static analytical frameworks that overlook potential time-varying effects or focus on earlier periods that may not reflect current economic realities. Additionally, the asymmetry between the short-run and long-run impacts of FDI on economic growth remains underexplored, particularly in the context of Nigeria's macroeconomic volatility.

Moreover, while the direct relationship between FDI and economic growth has been extensively examined, limited attention has been given to the transmission mechanisms and enabling conditions that may amplify or hinder FDI's growth-enhancing effects. These include factors such as exchange rate stability, institutional quality, human capital

development, and the depth of domestic financial markets—elements that theoretical models identify as critical moderators of FDI are developmental impact (Alfaro et al., 2004; Borensztein et al., 1998).

This study seeks to address these research gaps by empirically examining the impact of foreign direct investment on Nigeria's economic growth from 1986 to 2023 using the Autoregressive Distributed Lag (ARDL) approach. This methodology distinguishes between short-run and long-run effects while accounting for potential structural breaks and shifts in policy regimes over the study period. By incorporating relevant macroeconomic variables grounded in established economic and financial theories, the study offers a comprehensive analysis of the conditions under which FDI contributes to or detracts from economic growth in Nigeria.

The findings of this research carry significant implications for investment policy, macroeconomic management, and development strategies in Nigeria and other developing countries seeking to harness FDI for sustainable growth. The study is structured as follows: Part One presents the introduction; Part Two and Part Three cover the literature review and methodology, respectively; Part Four discusses the results and findings; and Part Five concludes with policy recommendations.

2.0 Literature Review

2.1 Conceptual Literature

Concepts such as foreign direct investment, exchange rate, and economic growth are empirically defined in this section.

2.1.1 Foreign Direct Investment

Foreign Direct Investment (FDI) is widely recognized as a vital driver of national wealth, significantly contributing to capital inflows, job creation, and improved management practices. Anghel (2019) emphasizes that FDI substantially enhances national wealth through various economic activities. Similarly, Vella and Sammut-Bonnici (2015) describe FDI as a lasting interest by a resident enterprise in one country in an enterprise located in another, highlighting its strategic role in providing essential resources such as technology and managerial expertise to influence operations in foreign markets.

Definitions of FDI often specify ownership and investment structure criteria. Kim et al. (2021) define FDI as requiring at least 10% equity ownership in a foreign firm, achieved either through the construction of new facilities or the acquisition of existing enterprises—reflecting companies' strategic growth in the global market.

2.1.2 Exchange Rate

The exchange rate is the value at which one currency can be exchanged for another. Mishkin (2019) explains it as the price of one country's currency in terms of another. Dornbusch and Startz (2018) similarly clarify that it denotes the rate at which currencies are exchanged. Ngerebo-a and Ibe (2013) define the exchange rate as the ratio of one currency unit to another at a given point in time.

2.1.3 Economic Growth

Economic growth is generally defined as an increase in the income of individuals and the total production of goods and services within a country. Ibrahim and Mohammed (2020) characterize it as rising income levels, while Miftahu (2020) emphasizes its measurement

through Gross Domestic Product (GDP), adjusted for inflation. Ubezie et al. (2020) describe economic growth as a sustained increase in total output over time, typically measured by real GDP. Likewise, Agu et al. (2019) define economic growth as the increased capacity of a nation to produce goods and services, measured using inflation-adjusted GDP.

Furthermore, in the context of developing nations, economic growth is closely tied to its sustainability and poverty reduction potential. Nwaeze et al. (2014) argue that sustained growth is essential for breaking poverty cycles, often pursued through proactive fiscal policy interventions.

2.2 Theoretical Literature

2.2.1 The Neoclassical Theory of Investment

The Neoclassical Theory of Investment, developed by Dale W. Jorgenson in the early 1960s, posits that firms base their investment decisions on the marginal productivity of capital (MPK) and the user cost of capital. According to this theory, firms seek to maximize profits by aligning MPK with the user cost of capital, thereby ensuring efficient capital allocation and fostering overall economic productivity and growth (Jorgenson, 1963). This framework is particularly applicable to foreign private investment (FPI), as it provides insights into how firms allocate capital across borders, targeting markets or financial assets where MPK is high relative to user costs.

The theory further argues that capital flows toward markets where it can be used most efficiently. As a result, foreign investors evaluate economic stability, regulatory frameworks, and growth potential when selecting investment destinations. The Neoclassical Theory supports global economic integration by promoting the efficient allocation of capital through FPI, ultimately enhancing global economic growth and stability.

2.2.2 The Eclectic Paradigm (OLI Framework)

The Eclectic Paradigm, also known as the OLI Framework, was introduced by John H. Dunning in 1977 to explain why multinational enterprises (MNEs) engage in foreign direct investment and how they choose specific investment locations. The framework comprises three core components: Ownership advantages (O), Location advantages (L), and Internalization advantages (I).

Ownership advantages refer to firm-specific assets such as proprietary technology, brand reputation, and managerial expertise, which provide a competitive edge in foreign markets (Dunning, 1977). Location advantages include host country attributes such as natural resources, labour availability, and favourable regulatory environments that attract foreign investors (Dunning, 1988). Internalization advantages arise when firms choose to manage operations internally to safeguard proprietary assets and minimize transaction costs, thereby increasing efficiency (Dunning, 1993). The Eclectic Paradigm remains a vital tool for understanding MNE behaviour, FDI strategies, and their broader economic impacts. It also offers valuable insights for policymakers aiming to attract and regulate FDI.

2.3 Empirical Review

This section presents empirical studies that examine the impact of foreign direct investment on Nigeria's economic growth. According to Stephen and Awolumate (2023), using the Auto-Regressive Distributed Lag (ARDL) model on annual time-series data from 1981 to 2021, FDI had a positive but statistically insignificant impact on Nigeria's economic growth in both the short and long run.

In the same vein, Ekpo et al. (2023) employed multiple regression, cointegration techniques, and ARDL on data spanning 1980 to 2018, and found no causal relationship between private investment and economic performance. While private domestic investment showed a positive but insignificant effect on real GDP, FDI exhibited no significant long-run impact. Ifeosame (2023), using the Error Correction Model (ECM) and Granger Causality tests on data from 1986 to 2018, found a positive and significant long-run relationship between FDI and the Human Development Index, suggesting a favourable link between FDI and economic development.

Furthermore, Oke et al. (2023) applied OLS, Johansen cointegration, and ECM techniques on data from 1986 to 2020 to assess FDI's impact on Nigeria's capital market. The study revealed that, although most variables positively influenced market capitalization, FDI had a weak influence, and money supply negatively affected it in the long run.

Keshab et al. (2022) examined the influence of FDI on stock market development in Nepal using Johansen cointegration and Granger causality tests with data from 1996 to 2020. They found that while FDI had a long-run positive effect, it exerted a negative influence in the short run, with a unidirectional long-run and bidirectional short-run causality.

Conversely, Oyegoke and Aras (2021) employed OLS estimation on data from 1970 to 2020 and found that FDI inflows had a positive impact on GDP, whereas FDI outflows showed a negative but statistically insignificant effect.

Ugwuanyi et al. (2020), using ARDL and gross fixed capital formation as a proxy for development, analyzed data from 1981 to 2018 and concluded that FDI had a positive but statistically insignificant impact on Nigeria's economic development.

In a similar direction, Hanson et al. (2020) used ARDL and Bounds testing on data from 1981 to 2017, showing that FDI and trade positively influenced real GDP, while the exchange rate had a negative and insignificant effect.

Ngobe and Emenike (2020) analyzed the relationship between FDI and stock market development in Eswatini from 1990 to 2018 using ARDL. Their results indicated a positive but statistically insignificant long-run relationship, with no short-run causality.

Finally, Wang et al. (2019) employed the ARDL model to study Ghana's stock market development from 1991 to 2017. The findings revealed a negative but insignificant long-run effect of FDI, while the short-run effect was significantly positive.

While many studies have examined how foreign investments affect Nigeria's economy, they haven't properly addressed the difference between immediate and long-term impacts. Previous research typically uses methods that can't capture how these effects change over time, especially in Nigeria's unstable economy. This study fills this gap by using the ARDL model to better understand these time-based differences in FDI's impact on economic growth.

3.0 Methodology

3.1 Theoretical framework

This study utilizes the Eclectic Paradigm (OLI Framework) to analyze why multinational enterprises engage in foreign direct investment (FDI) and how they select specific investment locations. The framework comprises three key components: Ownership advantages (O), which include firm-specific assets like technology and managerial expertise; Location advantages (L), which refer to the benefits provided by host countries, such as natural

resources and market potential; and Internalization advantages (I), where firms manage operations internally to safeguard proprietary knowledge and minimize transaction costs. In Nigeria, these principles are particularly relevant, as foreign investors introduce advanced technologies and management practices that enhance productivity, while the country's rich resources and large consumer market attract investments. The Eclectic Paradigm serves to explore the drivers of foreign investments in Nigeria and their economic impact from 1986 to 2023, as well as how policy changes and market conditions have affected investment flows and overall economic development.

3.2 Sources of Data

The study used secondary annual time series data. The data for all the variables were obtained from the statistical bulletin of the Central Bank of Nigeria (CBN, 2023) and the World Development Indicator (WDI, 2023).

3.3 Variables and Measurement

The variables on which the data were collected from CBN are Gross Domestic Product (GDP), Exchange Rate (EXR), and Interest Rate while data on Foreign Direct Investment was sourced from the World Development Indicator (WDI). Where GDP is the dependent variable on whose other variables are explained.

3.4 Model Specification

The study uses the Autoregressive Distributed Lag Model to analyse the effect of foreign direct investment on economic growth of Nigeria from 1986-2023. The model was adapted from the work of Hanson et al (2020) who empirically evaluated the impact of foreign direct investment on economic growth of Nigeria between 1981 and 2017. The authors' model is specified as follows:

$$RGDP = f\left(FDI,\ EXR,\ BOT\right) \tag{1}$$

The above model in an explicit form is given as:

$$RGDP = \beta_0 + \beta_1 FDI_t + \beta_2 EXR_t + \beta_3 BOP + \mu_t \tag{2}$$

RGDP = Real Gross Domestic Product
FDI = Foreign Direct Investment
EXR = Exchange Rate
BOT = Balance of Trade
ɥ = error term
β_0 = Constant
β_1 and β_2 = Coefficients of their respective variables
t = Time dimension

However, the model was modified by replacing BOT with interest rate (INT). Exchange rate and interest rate are included as control variables in the analysis to account for macroeconomic factors influencing GDP. The exchange rate affects investment costs, exports, imports, and profitability, while interest rates influence borrowing, investment decisions, and capital flows. Both variables can distort the FDI-economic growth relationship, making their inclusion crucial for accurate model estimation. This approach ensures a more robust and precise evaluation of FDI's true effect on economic growth.

$$GDP = \beta_0 + \beta_1 FDI_t + \beta_2 EXR_t + \beta_3 INT + \mu_t \quad (3)$$

Where,
GDP = Gross Domestic Product
FDI = Foreign Direct Investment
EXR = Exchange Rate1
INT = Interest Rate
ɥ = error term
β0 = Constant
β1 and β3 = Coefficients of their respective variables
t = Time dimension

For estimation purpose, some variables from equation (3) are re-specified in log-linear functional form in order to linearize non-linear variables also minimize spurious results, the study therefore converted the equation into their natural log form. Hence, the new equation is of the form:

$$\ln GDP = \beta_0 + \beta_1 FDI_t + \beta_2 \ln EXR_t + \beta_3 INT + \mu_t \quad (4)$$

The main equation (4) is re arrange into ARDL form to estimate both short-run and long-run relations and error correction term (ECT), and stated as equation 5

$$\begin{aligned} \Delta \ln GDP_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta \ln GDP_{t-i} + \sum_{i=0}^{q} \beta_3 \Delta FDI_{t-i} + \sum_{i=0}^{q} \beta_4 \Delta \ln EXR_{t-i} \\ + \sum_{i=0}^{q} \beta_5 \Delta INT_{t-i} + \alpha_1 \ln GDP_{t-1} + \alpha_3 FDI_{t-1} + \alpha_4 \ln EXR_{t-1} + \alpha_5 INT_{t-1} + \mu_t \end{aligned} \quad (5)$$

The parameter β0 and represent the intercept and disturbance error term respectively. Equation (4) test the null hypothesis β1 =β2= β3 = β4= β5 = 0 there is no cointegration relationship between the variables against the alternative of cointegration using the bound testing procedure to test long-run relationship of the model. Then the ARDL technique provides a unified framework for testing and estimating of co-integration relations in the context of a single equation. However, since the ARDL procedure is sensitive for a given lag length, the number of appropriate lags in the dependent variable will be chosen by the Akaike Information Criteria (AIC) and SIC (Schwartz Information Criterion) to ensure that the errors are white noise (Katircioglu, 2019). However, in order to measure the speed of adjustment from the short run dynamic to longrun equilibrium, the short-run model is also specified by also including the error correction term as follow:

$$\begin{aligned} \Delta \ln GDP_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta \ln GDP_{t-i} + \sum_{i=0}^{q} \beta_3 \Delta FDI_{t-i} \\ + \sum_{i=0}^{q} \beta_4 \Delta \ln EXR_{t-i} + \sum_{i=0}^{q} \beta_5 \Delta INT_{t-i} + \lambda ECT_{t-1} + \mu_t \end{aligned}$$

Where λ is the coefficient of the error correction term which measures the speed of adjustment from the short-run dynamics to the long-run equilibrium and μt represent the error term. In theory, the coefficient λ is expected to be significant and negative for short-run convergence to take place.

4.0 Results and Discussion

4.1 Augmented Dickey-Fuller (ADF) Unit Root Test

Table 1: Results of the ADF Unit Root Test

Variables	ADF @ Level	ADF @ First Diff.	Remark
LGDP	-0.958661	-3.704998**	I(1)
(C.V@5%)	(-2.945842)	(-2.945842)	
FDI	-1.821420	-7.773643**	I(1)
(C.V@5%)	(-2.943427)	(-2.945842)	
LEXR	-2.544834	-6.267320**	I(1)
(C.V@5%)	(-2.943427)	(-2.945842)	
INT	-4.027161**	- - - - - - - -	I(0)
(C.V@5%)	(-2.943427)		

Note: ** denotes stationarity order C V means critical value @5%
Source: Authors' computation using E-views 10, 2025

A stationary series is a series with constant mean and variance over time, and its auto covariance does not depend on it. The unit root test for stationarity was carried out using the Augmented Dickey-Fuller (ADF) unit root test. The result of the ADF tests in Table 1 revealed that LGDP, FDI and LEXR are stationary at first difference I (1) while INT is stationary at level I(0).

The mix orders of integration satisfy the condition for the choice of ARDL model.

4.2 VAR Lag Order Selection Criteria

Table 2: Presents the lag length criteria for F-Bound Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-948.7773	NA	5.19e+18	54.44442	54.62217	54.50578
1	-790.0622	272.0831*	1.50e+15*	46.28927*	47.17804*	46.59607*
2	-781.9651	12.02990	2.45e+15	46.74086	48.34065	47.29311
3	-768.7281	16.64077	3.18e+15	46.89875	49.20955	47.69644

Table 3 presents the lag order selection by five different criteria. All the lag selection criteria except SC suggest that a lag length one (1) is optimal for the F-bound cointegration test. Therefore, this study used a lag length one (1) for the cointegration test as suggested by AIC information criteria.

4.3 ARDL Bound Test for Cointegration

Table 3: F-Bounds Test Null Hypothesis: No levels relationship

F-Bounds Test			Null Hypothesis: No levels relationship	
Test Statistic	Value	Signif.	I(0)	I(1)

			Asymptotic: n=1000	
F-statistic	5.129545	10%	2.72	3.77
K	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

Source: Authors' computation using E-views 10, 2025

The result of the ARDL Bound Test for Cointegration shows that the F-statistics value of 5.129545 is greater than both the upper boundary and lower boundary at 5% level of significance. This implies that there is a cointegration (long run relationship) between economic growth (LGDP), and independent variables such as foreign direct investment (FDI), exchange rate (LEXR) and interest rate (INT). Therefore, the null hypothesis of no cointegration between the variables is rejected and the alternative hypothesis is accepted. Hence, the variables have long run equilibrium relationship with one another.

4.4 ARDL Model of Long-Run Effect of Variables

Table 4: ARDL Long-run estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	6.12E-11	3.38E-11	1.810682	0.0806***
LEXR	0.288963	0.062042	4.657514	0.0001*
INT	-0.030769	0.025754	-1.194727	0.2419

Note: * ** *** indicate significant at 1%, 5%, and 10% levels, respectively. **Source**: Authors' computation using E-views 10, 2025

The relationship among the variables is shown in Table 4, where the coefficient of foreign direct investment (FDI) demonstrates a positive and statistically significant relationship with economic growth in Nigeria at the 10% significance level. A percentage increase in FDI contributes to approximately 0.0000000000612% increase in GDP, confirming FDI as an important determinant of long-term economic growth The outcome is supported by (Stephen & Awolumate, 2023: Ekpo, 2023: Ifeosame, 2023: Keshab et al, 2022: Oyegoke & Aras, 2021: Ugwuanyi et al., 2020: Hanson et al., 2020: Ngobe & Emenike, 2020). Who found FDI to have positive relationship with economic growth.

Exchange Rate (LEXR) shows a significant positive impact on economic growth at the 1% significance level, with a coefficient of 0.288963. This suggests that a 1% increase in exchange rate leads to approximately 0.29% increase in GDP. This finding contradicts some theoretical expectations but indicates that exchange rate stability may attract investment in Nigeria's context. The outcome contradicts the findings by (Keshab et al., 2022: Hanson et al, 2020). Who found exchange rate to have negative relationship with economic growth in their studies.

Interest Rate (INT) exhibits a negative relationship with economic growth, with a coefficient of -0.030769, suggesting that higher interest rates may constrain economic growth. However, this relationship was not statistically significant This means that effective interest rate has no strong evidence to suggest that the rate has meaningful impact on economic growth in Nigeria.

4.5 ARDL Model of Short-Run Effect of Variables

Table 5: Results of ARDL Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.783883	0.154709	5.066837	0.0000
D(FDI)	-1.58E-12	3.24E-12	-0.488749	0.6287
D(LEXR)	-0.038548	0.018569	-2.075928	0.0469**
D(INT)	0.002270	0.001113	2.038525	0.0507**
CointEq(-1)*	-0.074936	0.015749	-4.758230	0.0000*

R-squared	0.547464	Mean dependent var	0.039563
Adjusted R-squared	0.490897	S.D. dependent var	0.037475
S.E. of regression	0.026739	Akaike info criterion	-4.280306
Sum squared resid	0.022879	Schwarz criterion	-4.062615
Log likelihood	84.18567	Hannan-Quinn criter.	-4.203560
F-statistic	9.678156	Durbin-Watson stat	1.661892
Prob(F-statistic)	0.000030		

Note: * ** *** indicate significant at 1%, 5%, and 10% levels, respectively.
Source: Authors' computation using E-views 10, 2025

Table 5 shows the results of the short-run relationship between economic growth (LGDP) and its independent variables (i.e FDI, LEXR, and INT). The result revealed that foreign direct investment (FDI) shows a negative but statistically insignificant relationship with economic growth in the short run, indicating that FDI does not immediately influence economic performance. In addition, exchange rate (LEXR) demonstrates a significant negative effect on economic growth in the short run at the 5% significance level, with a coefficient of -0.038548. This aligns with theoretical expectations that currency depreciation may initially reduce growth.

However, interest rate (INT) unexpectedly shows a positive and significant relationship with economic growth in the short run at the 5% significance level, with a coefficient of 0.002270 Lastly the Error Correction Term (ECT) is negative (-0.074936) and statistically significant at 1%, confirming the existence of a long-run equilibrium relationship. However, the adjustment speed is relatively slow at approximately 0.07% per year. The model explains about 56% of variations in economic growth as indicated by the R-squared value. The Durbin-Watson value of 1.661892 indicates the presence of positive serial correlation in the model.

4.6 Diagnostic Test

Table 6: The results of the Diagnostic Test

Test	F-statistics	Obs* R-squared	Probability
Serial Correlation	1.333901	3.327130	0.2803
Heteroscedasticity	3.616442	36.70998	0.3977
Jargue – Bera	1.552146	- - - - - - -	0.460210

Source: Authors' computation using E-views 10, 2025

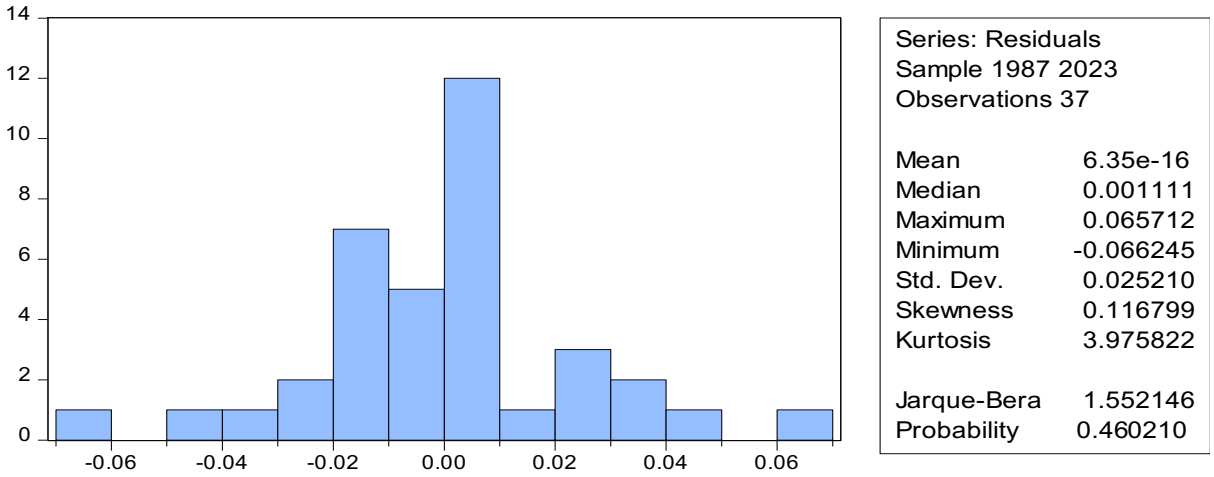

Figure 1: Test of normality

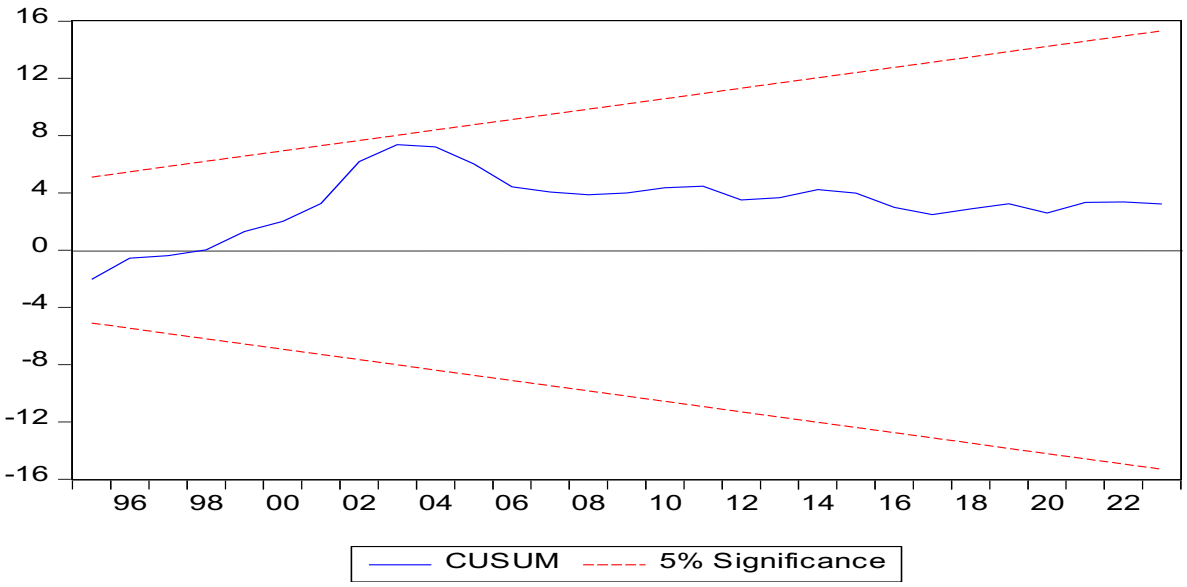

Figure 2: Test of stability

Table 6 shows the post estimations statistics. The serial correlation LM test has a probability value of 0.2803, which is greater than 0.05. This suggests that the null hypothesis of the absence of autocorrelation in the model cannot be rejected. Similarly, the probability value for the test of heteroscedasticity is 0.3977implying that the null hypothesis of absence of heteroscedasticity in the model cannot be rejected. The result passed the test of normality, as the normality plot reported in figure 1 shows that the Jarque-Bera value and its probability are 1.552146 and 0.460210 respectively. Hence, the null hypothesis that the error terms of the data used in the study are normally distributed cannot be rejected. Furthermore, the result passed the test of stability. This is because the CUSUM plot reported in figure 2 does not cross any of the 5% critical lines. Therefore, it could be concluded that the estimated parameters for the study are stable for the period under investigation. All diagnostic tests (serial correlation, heteroscedasticity, normality, and stability) confirm the model's validity and reliability

5.0 Conclusion and Policy Recommendations

This study uses annual data spanning 1986 to 2023 to examine the effect of foreign direct investment on economic growth of Nigeria. The result revealed that foreign direct investment (FDI) impacted positively on economic growth within the period under study. This is because;

the estimated coefficient is 6.12E-11 which imply that a percent increase in foreign direct investment (FDI) raises economic growth (LGDP) by approximately 0.0000000000612%. The result was significant at 10% with P<0.1 which mean that foreign direct investment is an important determinant of economic growth in Nigeria.

Based on the findings, it is recommended that;

i. To fully maximize the positive impact of FDI on economic growth in Nigeria, the government must improve regulations and simplify procedures to attract international investors, while concurrently investing in infrastructure and skills development to help local industry.
ii. In addition, establishing partnerships between multinational and domestic businesses can enhance knowledge transfer and capacity development, thereby assuring sustainable economic progress.

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