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THE IMPACT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH IN NIGERIA: AN ORDINARY LEAST SQUARES ANALYSIS (1990–2025)

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ABSTRACT

This paper explores how foreign direct investment (FDI) affects Nigeria's economic growth from 1990 to 2025. The yearly data for this study comprise a total of 36 observations. Data were sourced from the Central Bank of Nigeria Statistical Bulletin and the World Bank Development Indicators. Real gross domestic product (RGDP) serves as the dependent variable, while FDI, the interest rate, and the exchange rate are the independent variables. All variables are in natural logs except the interest rate, allowing coefficients to be read as elasticities. The Augmented Dickey–Fuller test was employed to establish the integration order. Consequently, every variable was found to be integrated of order one. Therefore, ordinary least squares (OLS) was used to estimate the long-run level relationships among these variables. OLS is recognized for providing reliable estimates of cointegration vectors when variables are I(1), although Engle and (C. W. Granger, 1987) and (Stock, 1987) note that OLS estimators face super-consistency issues. A static levels regression of I(1) series is likely to have serial correlation in residuals, so the usual standard errors should be interpreted with caution. Long-run estimates indicate that the exchange rate elasticity of real GDP was positive and significant, while the interest rate elasticity was negative and significant. The estimates also reveal that FDI has a statistically significant negative elasticity. Diagnostic test results confirm residual normality and no significant heteroscedasticity. However, positive and significant serial correlation was detected in the residuals. Thus, future research should consider a full error-correction model formulation. The study concluded that FDI did not generate a positive growth dividend in Nigeria during the review period when exchange rate and interest rate effects were accounted for. The devaluation of the Nigerian currency in the final years of the sample seems to have outweighed FDI's positive impact on growth. The study recommends that maintaining exchange rate stability and lowering monetary policy interest rates to encourage investment would lead to better growth outcomes.

1. Introduction

Foreign direct investment (FDI) constitutes a vital element in the developmental strategies of most emerging and developing economies. It manifests as direct investment from one economy into another, wherein the foreign direct investors anticipate a long-term interest. Generally, this involves ownership of assets representing 10 percent or more of the voting power of the enterprise in which the investment is made (IMF Balance of Payments and International Investment Position Manual, 6th Edition (BPM6) 2009; OECD Benchmark Definition of Foreign Direct Investment, 4th Edition 2008)(IMF, 2009; OECD, 2008). In contrast to portfolio investment, FDI encompasses managerial and technological dimensions and is generally long-term in nature.

A theoretical foundation exists for assuming that FDI exerts a beneficial influence on the economic growth of the host nation. Within the neoclassical growth model, FDI augments the domestic capital stock, thereby elevating the long-run output per worker. In endogenous-growth models, FDI generates spillover effects by introducing novel technologies, managerial practices, and access to new markets, culminating in productivity enhancements and subsequently elevated output and productivity growth. Nevertheless, these effects are contingent upon the attributes of the host economy, including institutions, human capital, macroeconomic stability, and complementarities between domestic and foreign enterprises.

Nigeria possesses a substantial domestic market endowed with vast natural resources and abundant labor, yet exhibits relatively low manufacturing levels and has encountered multiple adverse shocks, such as oil price fluctuations, exchange rate volatility, and political instability. The Nigerian government has undertaken various initiatives to foster domestic capital formation, including FDI, over time through policy measures and special economic zones. Nonetheless, the contribution of FDI to Nigeria’s aggregate economic growth has been called into question from both theoretical and empirical perspectives.

A substantial body of extant literature contains numerous studies examining the nexus between FDI and economic growth in Nigeria and other developing countries. Among the papers establishing a positive association between FDI and economic growth in Nigeria are (Adegbite & Ayadi, 2011; Adeleke, 2014; Ali & Sheikh, 2021; John, 2016; Koojaroenprasit, 2012) and others. Investigations that have found no significant relationship include(Akinlo, 2004, 2012) and (Louzi & Al Abbadi, 2011). More recently, evidence regarding the role of FDI in Nigeria's economic growth has been mixed. Accordingly, Olasehinde and Ajayi (2022) and Ogbaragu et al. (2024) report a positive effect, whereas Illo et al. (2025) and Akinwalere et al. (2025) identify negative and mixed effects, respectively. The divergent findings across these studies may stem from differing time periods examined in the analyses, varying econometric methodologies, and the variables employed as proxies for economic growth.

This paper contributes to the literature in multiple respects. First, we examine the entire span from 1990 to 2025, enabling us to capture the notable appreciation and depreciation of the Nigerian currency during 2024-2025, as well as the substantial contraction of FDI during the COVID-19 pandemic and associated macroeconomic difficulties. Second, we employ a log specification that permits direct interpretation of the elasticity of economic growth with respect to FDI and mitigates the potential issue of scale differences among variables. Third, we utilise ordinary least squares (OLS) to estimate the long-run relationship, which is suitable given the characteristics of the variables (see below), and we thoroughly examine the constraints of applying OLS to variables that are integrated of order one (Granger & Engle, 1987; Newbold & Granger, 1974).

1.1 Research Objectives

The primary objective of the study is to estimate the long-run relationship between foreign direct investment and real GDP in Nigeria using ordinary least squares. The specific objectives are:

- To estimate the long-run elasticity of real GDP with respect to FDI;
- To estimate the long-run effects of the exchange rate and the interest rate on real GDP;
- To assess the statistical adequacy of the estimated long-run relationship and to identify the appropriate dynamic framework for future work.

1.2 Research Hypotheses

The hypotheses to be tested are stated in null form:

- H1. Foreign direct investment has no statistically significant long-run effect on real GDP in Nigeria.
- H2. The exchange rate has no statistically significant long-run effect on real GDP in Nigeria.
- H3. The interest rate has no statistically significant long-run effect on real GDP in Nigeria.

2. Literature Review

2.1 Conceptual Review

Foreign direct investment is distinct from other forms of international capital flows because it involves a lasting interest and managerial control. As per the IMF BPM6 (2009) and the OECD Benchmark Definition (2008), FDI comprises three principal components: equity capital, reinvested earnings, and intra-company debt transactions. Equity capital entails the acquisition of shares in an enterprise located in another economy, whereas reinvested earnings denote the investor's portion of profits that are not paid out as dividends but are instead retained for reinvestment. Intra-company loans, conversely, refer to credit arrangements between a parent firm and its affiliate. Collectively, these three elements constitute the direct investment position.

Within Nigeria, FDI has primarily targeted the oil and gas sector, with additional inflows directed toward telecommunications, manufacturing, and, more recently, financial services. The emphasis of FDI in Nigeria on extractive industries has prompted concerns regarding limited backward and forward linkages with the broader domestic economy, a situation occasionally termed enclave development. Recent years have witnessed low capacity utilisation in manufacturing, attributable to unreliable electricity supply, inadequate transport infrastructure, and insecurity across various regions.

2.2 Theoretical Framework

The research is driven by the neoclassical and endogenous-growth perspectives regarding capital accumulation and technological advancement. Within the Solow-Swan neoclassical framework, a higher investment rate raises the steady-state output per worker, yet does not permanently alter the growth rate, which is governed by exogenous technological change. Consequently, FDI that merely augments the capital stock yields only a level effect. Endogenous-growth frameworks (Lucas Jr, 1988; Romer, 1990) permit FDI to directly influence the growth rate through knowledge transfer, human capital enhancement, or the broadening of intermediate input variety. The magnitude of these impacts hinges on the host country's

absorptive capacity, namely the capability of domestic enterprises and employees to integrate foreign technology.

Two additional theoretical perspectives inform the selection of control variables.(Aliber, 1970) advanced the currency-area hypothesis, suggesting that firms originating from nations with robust currencies are inclined to invest overseas, while a weak host currency may draw cost-oriented FDI, but could also raise the local-currency expense of capital goods acquired within the host country. According to Hymer's (1976) theory of firm-specific advantages, multinational enterprises invest abroad to exploit their valuable and partly non-marketable assets, including technology, brand, and organisational capabilities, which cannot be fully licensed at arm's length. These two viewpoints imply that the exchange rate and the domestic interest rate ought to be incorporated into the growth equation in addition to FDI.

2.3 Empirical Literature

Empirical studies on the FDI-growth nexus in Nigeria have produced divergent results. In his pioneering effort, Akinlo (2004) found that FDI played a limited role in economic growth, after controlling for extractive-sector investment. Adegbite and Ayadi (2011) and Adeleke (2014) found a more positive impact, particularly if institutional quality is considered. John (2016) also found a positive relationship. However, later studies confirm the mixed findings of the early contributors. Thus, using the ARDL approach, Olasehinde and Ajayi (2022) report positive short- and long-run effects of FDI. Ogbaragu et al. (2024) also found positive coefficients for Nigeria and Ghana. Illo et al. (2025), on the other hand, report negative estimates, attributable to poor institutional quality in their work Covering the period from 1981 to 2022, the study adopts the Autoregressive Distributed Lag (ARDL) model to assess both short- and long-run dynamics using annual time series data. Key variables include GDP per capita, FDI inflows, political rights, civil liberties, labour force participation, and financial development. Akinwalere et al. (2025), focusing specifically on sectoral FDI inflows from 1980-2024, found that oil, gas, manufacturing and telecoms added positively to growth while agriculture and services did not.

Cross-county and regional studies corroborate the conditional nature of the relationship. (Alaba, 2003) highlights the role of exchange-rate volatility in discouraging FDI into Nigeria.(Szirmai & Verspagen, 2011) and (Elhiraika, 2008) document the importance of manufacturing and industrial policies for African growth, highlighting the significance of the sectoral composition of FDI. Similarly, the post-2021 literature (Abubakar & Oladipo, 2026; Dickson, 2026) also contends that FDI has a limited role in driving growth in the absence of infrastructure investment, currency stability and improved institutions. Similarly, their findings suggest that Nigeria's growth performance is undermined by speculative portfolio flows, inflationary pressures, and tight monetary policy, highlighting the need for improved capital flow management, coordinated macroeconomic policy, and strengthened financial regulation to foster sustainable economic growth.

2.4 Research Gap

The contribution of the present paper is modest and transparent: updating the empirical sample to the full period 1990–2025, employing a logarithmic specification that yields elasticities comparable to those in the international literature, reporting complete unit-root and residual diagnostics, and discussing the methodological limitations of static ordinary least squares when the underlying series are integrated of order one (Granger & Newbold, 1974; Engle & Granger, 1987). The appropriate next step an ARDL error-correction model or a vector error-correction model remains for future research.

3. Methodology

3.1 Research Design

The study employs a quantitative, ex-post-facto methodology. The variables of interest are historical events that are observed and cannot be controlled by the researcher. Annual secondary time-series data have been analysed using conventional econometric methods performed in open-source statistical software.

3.2 Data Sources and Variables

Annual data covering the period 1990–2025 (36 observations) were obtained from the Central Bank of Nigeria Statistical Bulletin and the World Bank's World Development Indicators. The variables employed are:

- Real Gross Domestic Product (RGDP) – the dependent variable and proxy for economic growth, measured in billions of naira;
- Foreign Direct Investment (FDI) – net inflows in millions of United States dollars;
- Interest Rate (INTR) – a representative domestic lending or policy rate, measured in percent;
- Exchange Rate (EXCR) – the nominal naira–US dollar rate.

All series except the interest rate are transformed into natural logarithms. The logarithmic transformation converts coefficients into elasticities, reduces the influence of extreme observations, and mitigates the scale disparities that arise when variables are measured in different units.

Table 1

Selected Observations from the Macroeconomic Dataset (1990–2025)

Year	RGDP (₦B)	FDI ($M)	INTR (%)	EXCR (₦/$)
1990	18,152.90	1,424	25.01	8.04
1995	21,716.50	1,491	19.50	21.89
2000	23,620.30	2,992	16.78	102.11
2005	25,979.00	4,527	13.20	132.15
2010	29,813.70	3,296	5.46	150.30
2015	33,780.50	3,363	10.65	193.28
2020	36,051.20	1,004	11.80	360.00
2023	37,637.20	925	18.36	635.00
2024	39,183.20	1,160	24.08	1,450.00
2025	40,459.40	812	27.32	1,650.00

Source: Central Bank of Nigeria Statistical Bulletin and World Bank Development Indicators. The full annual series of 36 observations is used in estimation. Large exchange-rate depreciations occurred in 1999 and especially in 2024–2025.

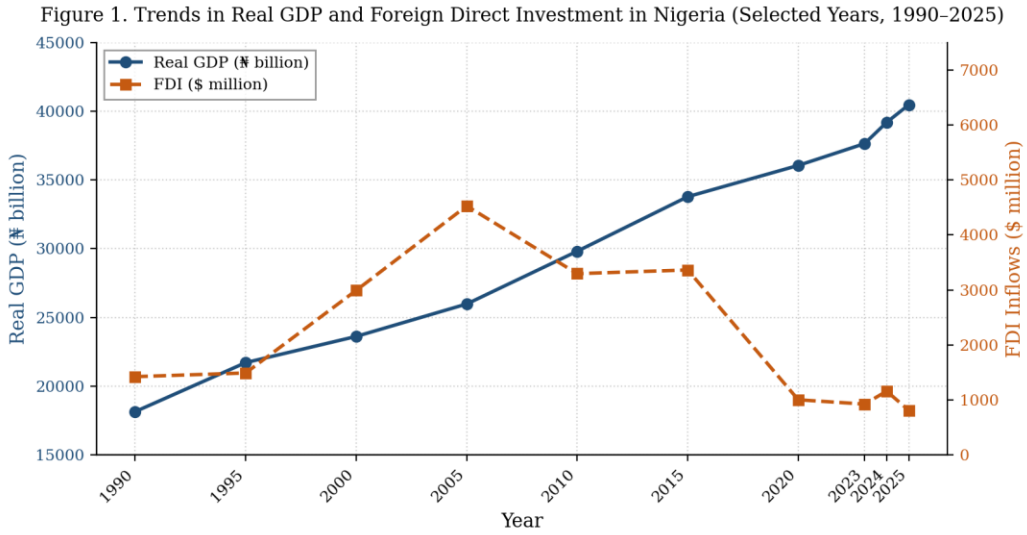

Figure 1

Trends in Real GDP and Foreign Direct Investment in Nigeria (Selected Years, 1990–2025)

Figure 1

The figure shows a line graph that compares the trends in real gross domestic product (GDP) on the left axis (solid line) and net foreign direct investment (FDI) on the right axis (dashed line) for the selected years between 1990 and 2025. The trend in real GDP shows an upward trajectory with a steady increase from approximately ₦18,153 billion in 1990 to about ₦40,459 billion in 2025. In contrast, the trend in net FDI shows a fluctuating pattern with its peak at around $4,500 million in 2005 followed by a significant decline to a low of below $1,500 million in 2020. It can be seen from the figure that while real GDP shows a consistent growth trend, net FDI shows a declining trend after 2015, which suggests a lack of sustained growth in FDI during the period in question.

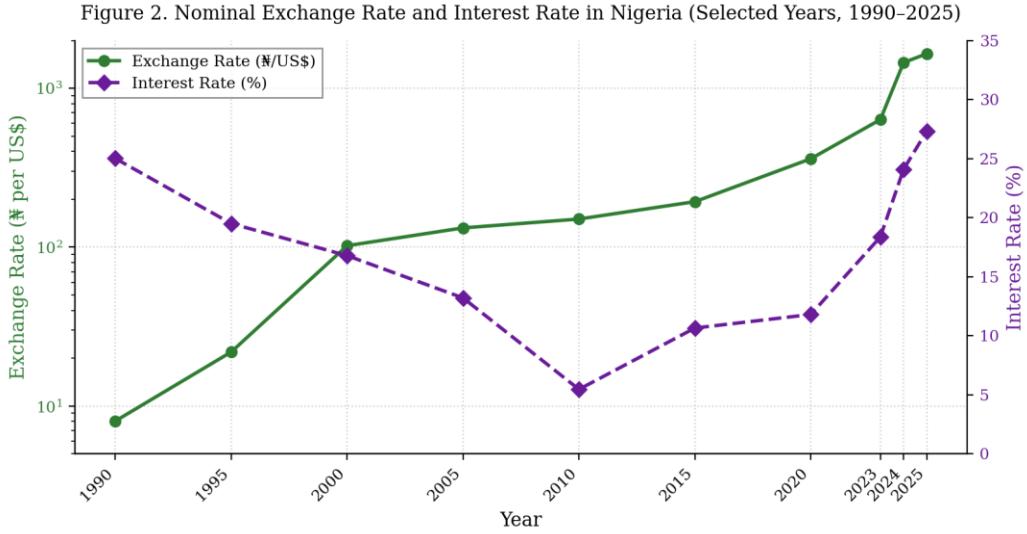

Figure 2

Nominal Exchange Rate and Interest Rate in Nigeria (Selected Years, 1990–2025)

Figure 2

This figure depicts a set of two variables, plotted on a logarithmic scale on the left axis. The first variable is the nominal naira–US dollar exchange rate, which has a long-term trend that appreciates substantially in 2024–2025, from ₦8.04/$ in 1990 to ₦1,650/$ in 2025. The second variable is a representative domestic interest rate, which follows a U-shaped pattern through time, falling from very high double-digit levels in the early 1990s to a minimum around 2010 of close to 5.5%, and then rising to well above 27% by 2025. The figure shows macroeconomic turbulence characteristic of the later years in the sample.

3.3 Model Specification and A Priori Expectations

The long-run relationship is specified as:

$$ln(RGDP)_t = \beta_0 + \beta_1 ln(FDI)_t + \beta_2 INTR_t + \beta_3 ln(EXCR)_t + u_t$$

A priori, the coefficient on ln(FDI) is expected to be positive if foreign investment augments the capital stock and transfers technology. The coefficient on the interest rate is expected to be negative, reflecting the conventional cost-of-capital channel. The sign of the exchange-rate coefficient is theoretically ambiguous: a depreciation of the naira may improve the competitiveness of tradable output, but it also raises the domestic-currency cost of imported capital goods and intermediate inputs, which can contract investment and growth.

3.4 Estimation Procedure

The empirical analysis proceeds in the following sequence:

1. Descriptive statistics are computed to characterise the central tendency, dispersion and distributional properties of each series.
2. Augmented Dickey-Fuller unit-root tests are conducted at levels and at first differences, with lag length selected by the Akaike information criterion and an intercept included in the test regression (Dickey & Fuller, 1979; Said & Dickey, 1984).
3. Given that the series are I(1), a logarithmic long-run equation is estimated by ordinary least squares (OLS) as the primary estimation method. OLS is known to yield super-consistent estimates of the cointegrating parameters when the variables are cointegrated (Stock, 1987; Engle & Granger, 1987), although conventional t-statistics may not be asymptotically valid in the presence of residual serial correlation.
4. Residual diagnostics—Jarque-Bera normality, an informal assessment of serial correlation via the Durbin-Watson statistic, and discussion of heteroscedasticity—are reported.
5. The limitations of static OLS for cointegrated systems are acknowledged, and the ARDL bounds-testing approach of Pesaran, Shin and Smith (2001)(Pesaran et al., 2001) or a vector error-correction model is identified as a preferred framework for subsequent dynamic analysis.

Endogeneity between FDI and growth is recognised: market-seeking FDI may respond to growth opportunities as well as cause them. The estimated coefficients should therefore be interpreted as

conditional associations rather than pure causal effects. Instrumental-variable or lag-based strategies would be required for stricter causal claims.

4. Empirical Results

4.1 Descriptive Statistics

Table 2 presents descriptive statistics for the 36 annual observations. The average real GDP amounts to ₦28,628 billion, with a standard deviation of ₦6,377 billion. Average FDI inflows approximate $2,619 million; however, the series exhibits considerable volatility, with a minimum of $298 million recorded in 2021 and a maximum of $6,974 million in 2009. The mean interest rate stands at 15.79 percent. The average exchange rate is ₦238.26 per US dollar, and the distribution is highly right-skewed owing to the pronounced depreciations in 2024 and 2025, when the rate surpassed ₦1,400 and ₦1,600, respectively.

Table 2

Descriptive Statistics (1990–2025, N = 36)

Statistic	RGDP	FDI	INTR	EXCR
Mean	28,628.09	2,618.58	15.79	238.26
Median	28,491.95	2,140.50	14.42	132.82
Maximum	40,459.40	6,974.00	30.22	1,650.00
Minimum	18,152.90	298.00	5.46	8.04
Std. Dev.	6,376.74	1,745.85	5.80	351.78
Skewness	0.11	0.73	0.62	3.16
Kurtosis	–1.18	–0.31	0.08	10.41
Jarque-Bera p	0.34	0.20	0.34	0.00

Source: Author's computation from CBN and World Bank data.

4.2 Unit-Root Test Results

Table 3 reports the results of the Augmented Dickey-Fuller tests carried out on the levels and the first differences. Lag length was chosen automatically by the Akaike information criterion; an intercept was incorporated in each test regression. For all series the null hypothesis of a unit root cannot be rejected at conventional significance levels when the test is applied to the level (or log-level) of the variable. After first differencing, the null is rejected at the 1 percent level or better for all four series. As a consequence, ln(RGDP), ln(FDI), the interest rate and ln(EXCR) are classified as integrated of order one, I(1). No series is estimated to be I(2).

Table 3

ADF Unit-Root Tests (1990–2025)

Variable	Level (p-value)	1st Difference (p-value)	Order of Integration
ln(RGDP)	0.546	0.002	I(1)
ln(FDI)	0.125	0.000	I(1)
INTR	0.259	0.000	I(1)
ln(EXCR)	0.853	0.001	I(1)

Source: Author's computation. Lag length selected by AIC; intercept included in the test equation.

4.3 Long-Run OLS Estimates

Table 4 presents the ordinary least squares estimates for the logarithmic long-run equation. The elasticity of real GDP with respect to exchange-rate changes is positive and strongly significant (around 0.16). Thus, a one-percent depreciation of the naira is typically linked with a 0.16 percent increase in real GDP over the sample period. The coefficient on the interest rate is negative and significant, which aligns with the cost-of-capital channel. The FDI elasticity is negative and statistically significant at the 1 percent level (approximately -0.05). The model accounts for 92 percent of the variation in ln(RGDP).

Residual diagnostics indicate that the residuals are consistent with normality, as the Jarque-Bera p-value is roughly 0.59. The Durbin-Watson statistic of about 0.72 points to the presence of positive serial correlation. This is an expected feature of a static regression involving I(1) variables (Granger & Newbold, 1974) and does not necessarily undermine the point estimates of the long-run relationship; however, it does suggest that the conventional t-statistics and standard errors are not valid. A comprehensive ARDL error-correction model or a vector error-correction model would yield asymptotically valid inferences, capture short-run dynamics, and provide an estimate of the speed of adjustment toward long-run equilibrium (Pesaran et al., 2001; Johansen, 1988).

Table 4

Long-Run OLS Estimates – Dependent Variable: ln(RGDP), 1990–2025

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	10.015	0.164	60.89	0.000
ln(FDI)	–0.051	0.017	–2.92	0.006
INTR	–0.009	0.002	–3.74	0.001
ln(EXCR)	0.157	0.009	17.17	0.000

R^2 = 0.920; Adjusted R^2 = 0.912; F-statistic = 122.2 ($p < 0.001$); N = 36. Jarque-Bera $p \approx 0.59$; Durbin-Watson ≈ 0.72. Source: Author's computation.

Figure 3. Relationship between ln(Real GDP) and ln(Exchange Rate), 1990–2025

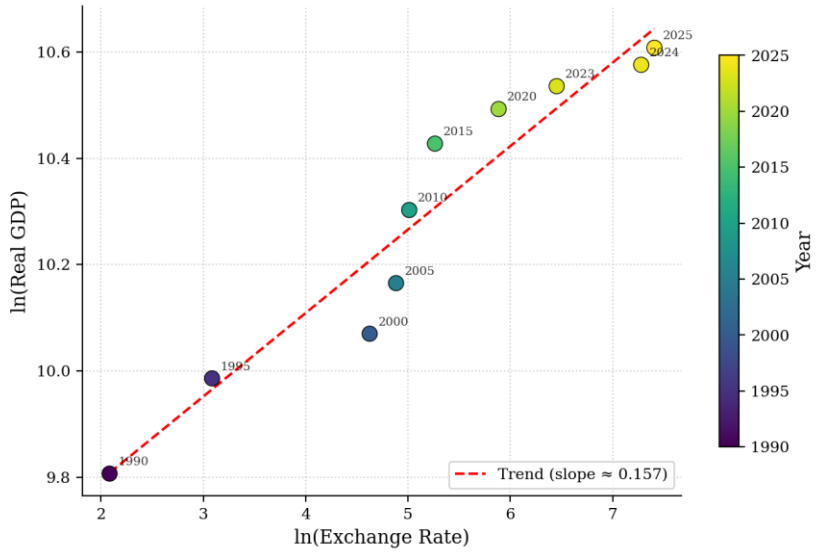

Figure 3

Scatter Plot of ln(Real GDP) against ln(Exchange Rate), 1990–2025

Figure 3

This scatter diagram shows the natural logarithm of real GDP plotted against the natural logarithm of the nominal exchange rate in the given years. The points are colour-coded according to year (see colour bar on the right). The linear trend (dashed red line) fitted to this diagram has a positive slope of approximately 0.16, which is consistent with the OLS coefficient on ln(EXCR) reported in Table 4. The tight upward-sloping cluster of points reflects the strong positive association between currency depreciation and measured real GDP over the sample period, with the most recent observations (2024–2025) located at the upper-right extreme of the diagram, reflecting the large depreciations of those years.

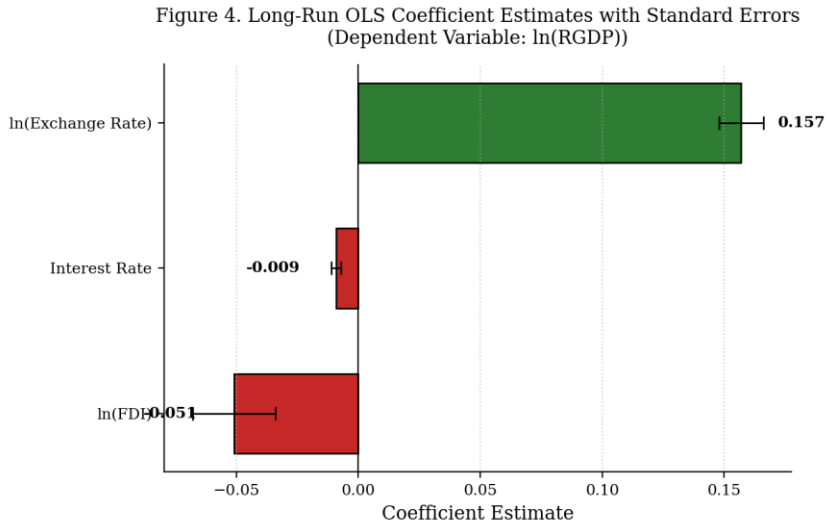

Figure 4

Long-Run OLS Coefficient Estimates with Approximate Standard-Error Bars

Figure 4

Summary of the three key slope coefficients from the long-run OLS regression (Table 4), with approximate ±1 standard-error bars. The coefficient on ln(EXCR) is positive and large (0.157), and the coefficients on ln(FDI) (–0.051) and the interest rate (–0.009) are negative. It is immediately apparent that the exchange-rate elasticity dominates in magnitude and that the FDI elasticity is statistically different from zero at conventional significance levels when the exchange rate and interest rate are controlled for.

5. Discussion of Results

The empirical evidence covering 1990–2025, derived from ordinary least squares applied to the long-run logarithmic specification, indicates that exchange-rate movements and the domestic interest rate are the primary determinants of the long-run relationship with real GDP, whereas the FDI term fails to display the positive elasticity anticipated by the basic capital-augmentation hypothesis.

The positive and strongly significant exchange-rate elasticity aligns with a competitiveness or valuation mechanism: a depreciated naira enhances the relative appeal of Nigerian tradable goods in global markets and raises the naira valuation of dollar-denominated activities. Concurrently, this estimate is predominantly

influenced by the severe depreciations observed in 2024 and 2025. These depreciations coincided with a wider phase of macroeconomic adjustment characterized by elevated interest rates and reduced import volumes; consequently, isolating a pure competitiveness effect proves difficult. The finding ought to be understood as a conditional association rather than a structural elasticity of export competitiveness.

The negative and statistically significant interest-rate coefficient is consistent with the principles of monetary transmission. Elevated borrowing costs raise the user cost of capital, suppress domestic investment, and may also discourage foreign investors who finance local operations through domestic credit markets. Although statistically significant, the coefficient's magnitude is economically modest, indicating that interest-rate policy serves as only a partial determinant of growth.

The negative FDI elasticity constitutes the most unexpected outcome. This result does not imply an inherent detrimental effect of foreign investment; rather, it suggests that, when controlling for interest-rate and exchange-rate dynamics, higher recorded FDI inflows during the sample period were not linked to increased real GDP. Several factors could account for this finding. First, a substantial portion of Nigerian FDI has historically targeted the oil and gas sector, which operates as an enclave with minimal backward linkages to domestic manufacturing and services. Second, macroeconomic instability, especially exchange-rate volatility, may have hindered the productivity spillovers that FDI theoretically generates. Third, reverse causality is plausible: periods of robust growth may attract FDI, whereas stagnation phases might coincide with both low growth and residual FDI inflows that adjust sluggishly. The static OLS regression cannot differentiate among these channels (Granger & Newbold, 1974).

Given the presence of residual serial correlation and the I(1) nature of the variables, the reported t-statistics should be interpreted with caution. Employing an ARDL bounds test followed by an error-correction representation (Pesaran et al., 2001), or a Johansen vector error-correction model incorporating appropriate lag lengths and deterministic terms (Johansen, 1988), would produce more reliable inferences and also provide estimates of short-run dynamics and adjustment speed. These approaches represent natural extensions of the current analysis.

6. Conclusion and Recommendations

This research examined the long-term association between foreign direct investment (FDI) and economic growth in Nigeria from 1990 to 2025. Employing an annual, log-specified ordinary least squares regression, the analysis reveals that the real GDP elasticity with respect to the exchange rate is positive and strongly significant, the interest-rate coefficient is negative and significant, and the FDI elasticity is negative and statistically significant. All four series exhibit first-order integration. Residual diagnostics indicate normality alongside positive serial correlation, suggesting that the static levels regression inadequately captures the underlying dynamics (Engle & Granger, 1987).

The principal policy implication is that merely attracting FDI volume does not constitute a viable approach to enhancing the aggregate growth rate. The policy recommendations derived directly from the estimates are as follows:

1. **Exchange-rate stability:** The substantial and significant exchange-rate coefficient, combined with the severe depreciations observed in 2024-2025, implies that stabilizing the currency should be a key priority. Such a policy adjustment would diminish the risk premium for long-term investors and enhance the functionality of the competitiveness channel.

2. **Interest-rate policy:** The negative and significant interest-rate coefficient indicates that elevated borrowing costs hinder growth performance. The monetary authority ought to aim at stabilising inflation expectations and avoiding excessively high real interest rates that weaken productive private investment, both domestic and foreign.
3. 3 **FDI quality and domestic linkages:** The lack of a positive FDI elasticity suggests that the composition and integration of foreign investment are more critical than aggregate inflows. Policy efforts should emphasise promoting FDI forms with demonstrated backward and forward linkages, including manufacturing, telecommunications, and energy, while bolstering domestic absorptive capacity via skills development, infrastructure, and supplier-linkage programs.
4. **Methodological extension:** Subsequent research should estimate a comprehensive ARDL bounds-testing specification (Pesaran et al., 2001) or a properly formulated VECM (Johansen, 1988) to obtain valid standard errors, analyse short-run dynamics, and identify the error-correction coefficient. This initiative would also facilitate the execution of formal cointegration tests and the correction of residual serial correlation within the static OLS framework.

In summary, the results obtained for the 1990-2025 interval indicate that Nigeria's economic growth has been more strongly linked to fluctuations in the exchange rate and interest rate rather than to the magnitude of foreign direct investment. Enhancing the productivity of FDI necessitates complementary reforms aimed at stabilising the macroeconomic climate and strengthening the connections between foreign investors and the local economy.

AI Declaration

The author declares that artificial intelligence (AI) tools including language models such as chat Grammarly and quillbot where you use to support the preparation on this manuscript. These tools assisted in tasks such as language refinement, paraphrasing, formatting, and improving the clarity of expression. All intellectual content, data interpretation, and conclusions presented in the paper are the original work of the authors. the authors take full responsibility for the accuracy and integrity of the content.

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