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IMPACT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH IN NIGERIA: MODERATING ROLE OF GOVERNANCE

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Abstract

Nigeria has attracted significant Foreign Direct Investment (FDI) with the expectation of driving growth through capital inflows, employment, and technology transfer. However, its actual impact remains uncertain due to weak governance, regulatory inconsistencies, and institutional inefficiencies. This raises the need to examine whether governance conditions shape the relationship between FDI and economic growth in Nigeria. This study therefore examines the impact of Foreign Direct Investment (FDI) and economic growth in Nigeria, emphasizing the moderating role of governance. While FDI is often viewed as a catalyst for growth through capital inflow, employment generation, and technological transfer, its real impact remains ambiguous in Nigeria. The study utilizes annual time series data from 1996 to 2023, sourced from the Central Bank of Nigeria, World Bank's World Development Indicators (WDI), and Worldwide Governance Indicators (WGI). Employing the Autoregressive Distributed Lag (ARDL) model and interaction terms between FDI and governance variables, the study finds that FDI has an insignificant effect on economic growth. However, the interaction between FDI and governance show a positive and significant effect on economic growth. These findings demonstrate the critical role governance play in unlocking the growth enhancing potential of FDI. The study recommends structural governance reforms, regulatory consistency, and diversification strategies as essential pathways for making FDI a viable tool for Nigeria's economic transformation.

Keywords: Foreign Direct Investment, Economic Growth, Governance, Nigeria, ARDL.
JEL Classification Codes: F21, F43, O55

1.0 Introduction

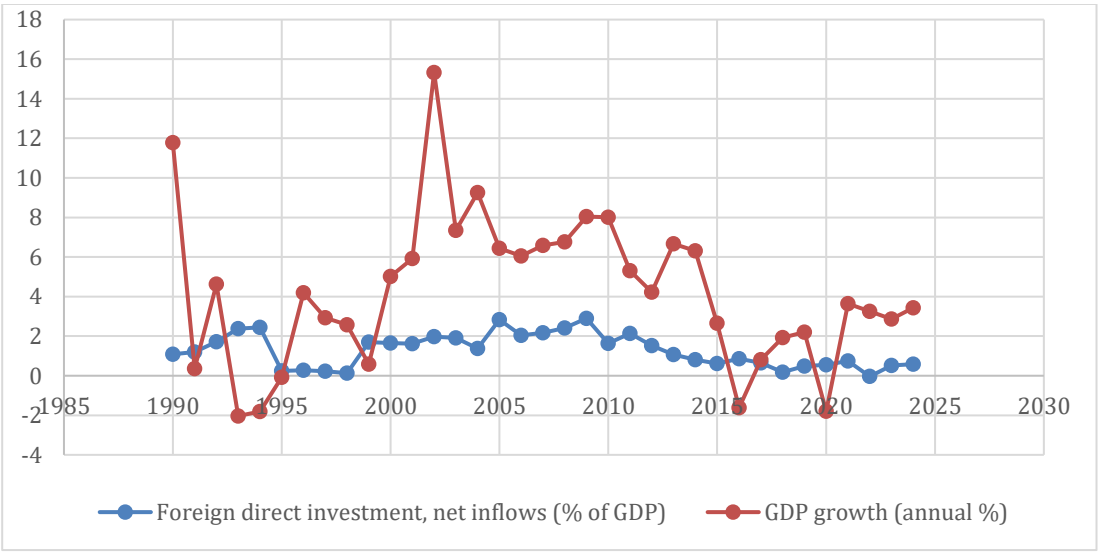
Foreign Direct Investment (FDI) plays a crucial role in promoting economic growth, especially in developing countries like Nigeria. It brings in capital, creates jobs, transfers technology and managerial know-how, and connects domestic economies to global markets (Animigha et al., 2023). Beyond these, FDI can help build infrastructure, boost industrial output, and improve a country's export performance. However, these benefits are not guaranteed as they largely depend on the domestic environment, particularly the strength of governance and institutions (Moussouni, 2024; UNCTAD, 2023).

(Good governance reflected in elements such as rule of law, political stability, regulatory efficiency, and control of corruption shapes how well a country attracts and utilizes FDI (Acemoglu & Robinson, 2012; North, 1992). Countries with strong institutions tend to receive higher-quality, long-term investments and make better use of these resources. On the other hand, weak governance often leads to unpredictable regulations, corruption, and policy reversals, all of which discourage investors and undermine economic performance (Bouchoucha & Yahyaoui, 2020; Raza et al., 2019). As a result, governance is increasingly seen not just as a growth factor, but as a key influence on how FDI affects that growth.

Nigeria illustrates this complexity well. Despite its large economy and abundant natural resources, the country has not consistently reaped the benefits of FDI. While investors exhibit a significant interest in the potential opportunities presented by Nigeria, the actual inflows of foreign direct investment have demonstrated considerable instability (Obayori & Chioma-Chidinma, 2018). In fact, between 2021 and 2022, Nigeria's FDI plunged from $3.3 billion to a net outflow of -$187 million the lowest in over 30 years (UNCTAD, 2023; World Bank, 2020). This steep decline reflects deeper issues such as corruption, weak infrastructure, political instability, and inconsistent regulation, all of which shake investor confidence (Ozegbe & Salami, 2023; Sule et al., 2023). In contrast, countries like Egypt and South Africa benefiting from stronger governance saw notable increases in FDI over the same period, while Mauritius continued to attract steady inflows, highlighting how good governance supports investment stability (UNCTAD, 2023). Research on the impact of FDI on Nigeria's growth has produced mixed results. Some scholars (Akinyemi et al., 2018; Orji et al., 2021) find a positive relationship, while others (Ajayi et al., 2023; Ozili, 2025) argue that FDI's impact is limited, especially when institutions are weak. These differing conclusions suggest that governance might be the critical factor influencing whether FDI translates into real economic development.

This study, therefore, examines how governance interacts with FDI to shape economic growth in Nigeria. By using econometric models with interaction terms, it aims to provide new evidence on whether good governance strengthens the growth-enhancing effects of FDI or whether its absence limits them. In doing so, it adds to the ongoing discussion on how institutional quality affects development outcomes.

Figure 1.1: Trend Analysis of FDI and Economic Growth in Nigeria (1996–2023)



Source: World Development Indicator (WDI), 2024

An overview of the trend of Foreign Direct Investment (FDI) inflows and economic growth in Nigeria reveals a highly volatile and inconsistent pattern over the study period. From 1996 to the early 2000s, Nigeria experienced modest FDI inflows, largely concentrated in the oil and gas sector (Keji, 2023). Between 2001 and 2007, FDI inflows grew significantly, peaking in 2007 at over $6 billion. During this period, real GDP growth averaged around 6 to 7%. However, from 2008 onward, FDI inflows began to decline due to global and domestic instability (UNCTAD, 2022). A record low occurred in 2022, with a negative net FDI inflow of -$187 million. However, economic growth remained moderately positive until 2013, followed by recession and pandemic shocks, which reduced growth to below 2%. The divergence between FDI and GDP growth trends highlights a structural disconnect, emphasizing the importance of institutional quality (Osabuohien-irabor & Drapkin, 2022). The remainder of this paper is organized as follows: Section 2 reviews relevant literature on the subject matter; Section 3 outlines the study's methodology; Section 4 presents the empirical results and key findings; and Section 5 provides the conclusion.

2.0 Literature Review

Conceptual Review

Foreign Direct Investment (FDI), as defined by the International Monetary Fund (2019) and the OECD (2008), refers to a cross-border investment by a resident entity in one country into a business enterprise in another, with the intention of establishing a lasting interest and exerting a significant degree of control. Beyond the provision of capital, FDI plays a pivotal role in transferring advanced technologies, managerial expertise, and access to global markets, thereby stimulating productivity and competitiveness in the host economy (Dunning, 1993). Similarly, economic growth commonly measured by a consistent increase in real Gross Domestic Product (GDP) is driven by various factors including capital accumulation, human capital development, and technological progress, as emphasized by Solow (1956) and Romer (1990). According to the World Bank (2020), for growth to be inclusive and sustainable, it must also lead to structural transformation and benefit all sectors of society. However, the effectiveness of both FDI and economic growth policies largely depends on the quality of governance. Governance, in this context, encompasses the institutions, rules, and processes that guide political and economic interactions (North, 1990), while Rodrik (2000) argues that transparency, accountability, and regulatory efficiency are vital for ensuring that investments yield broad-based developmental outcomes. In support of this, the World Bank's Worldwide Governance Indicators (WGI) provide six key dimensions control of corruption, rule of law, government effectiveness, political stability, voice and accountability, and regulatory quality which collectively influence a country's ability to attract and maximize the benefits of FDI and foster inclusive economic growth.

Theoretical Review

The relationship between Foreign Direct Investment (FDI), governance, and economic growth can be best understood through various theoretical lenses, each offering distinct insights. The Solow Growth Model (Solow, 1956), a foundational neoclassical framework, attributes long-term economic growth primarily to capital accumulation and exogenously determined technological progress. Within this context, FDI is assumed to contribute directly to economic output by increasing the capital stock. However, a key limitation of the Solow model is its treatment of technological advancement as external to the system, alongside its limited attention to the role of institutions and governance structures (Barro & Sala-I-Martin, 2004). In contrast, the Endogenous Growth Theory, developed by Lucas (1988) and Romer (1990), provides a more dynamic and internally consistent explanation of growth by emphasizing that technological progress, innovation, and human capital are endogenously driven. This framework is particularly relevant for understanding how FDI fosters long-run

growth, especially when it involves knowledge spillovers, research and development (R&D), and managerial know-how, elements that are highly sensitive to the quality of a country's institutional environment.

Furthermore, the Cobb-Douglas Production Function (Cobb & Douglas, 1928), which models output as a function of capital and labour, has been widely used to empirically assess the impact of FDI on growth. While it provides a useful starting point for quantifying the contribution of factor inputs, it has been critiqued for treating capital homogeneously and overlooking the qualitative aspects of FDI, such as spillover effects, innovation transfer, and alignment with local institutions (Alfaro et al., 2000; Borensztein et al., 1998).

To address these shortcomings, Institutional Theory, as proposed by North (1990), introduces the importance of institutions in shaping economic performance. This perspective posits that FDI is not inherently growth-inducing unless it operates within a framework of effective institutions, including strong property rights, rule of law, and regulatory efficiency. In fact, Acemoglu and Robinson (2012) argue that institutional quality determines whether FDI translates into broad-based development or merely benefits a narrow elite.

Empirical Review

FDI and Economic Growth

Empirical findings on the relationship between Foreign Direct Investment (FDI) and economic growth, particularly in Nigeria, remain inconclusive. A number of studies support the positive impact of FDI on GDP. For example, Akinyemi et al. (2018), using the ARDL model, confirmed that FDI significantly contributes to Nigeria's economic output in both the short and long run. This finding is echoed by Orji et al. (2021) and Ayunku (2019), who argue that when FDI is channelled into sectors like manufacturing, infrastructure, and technology, it becomes a vital driver of growth. These studies align with endogenous growth theory, highlighting the contribution of FDI to fostering innovation, facilitating knowledge transfer, and enhancing human capital development. Similarly, Jibir and Abdu (2017), analysing data from 1970 to 2014 using a Vector Error Correction Model and Granger Wald test, found a long-run positive relationship between FDI and economic growth in Nigeria. They stressed the need for the Nigerian government to create a more conducive investment climate to attract further foreign inflows. Supporting this view, Ari et al. (2022) employed the ARDL model on data from 1996 to 2019 and found that FDI has a statistically significant and positive impact on growth in both the short and long term. Their recommendation also focused on policy efforts to boost both domestic and foreign investment levels. However, other studies present contrary evidence. Ajayi et al. (2023) and Ozili (2025) argue that FDI's effect on Nigeria's growth is negligible, attributing the weak performance to poor absorptive capacity, repatriation of profits, crowding out of local investors, and persistent institutional inefficiencies. Giwa et al. (2020) offers a more balanced view, noting that although FDI can create jobs and improve capital availability, it may not lead to inclusive growth unless accompanied by structural reforms and stronger linkages within domestic value chains.

On a regional scale, mixed outcomes are also evident. Ayenew (2022) found that in Sub-Saharan Africa, FDI positively influences long-run growth, particularly where macroeconomic stability exists. In contrast, Mathebula et al. (2024) observed a negative FDI-growth relationship in South Africa, attributing it to governance challenges and poor resource allocation. Meanwhile, Ndlovu and Haabazoka (2024) reported strong positive effects of FDI on Zambia's GDP, emphasizing that investor confidence and consistent policy frameworks are critical to maximizing the benefits of foreign investment.

Governance and Economic Growth

The role of governance in driving economic performance has gathered increasing attention in empirical literature. Governance, is commonly measured using indicators like control of corruption, regulatory quality,

political stability, and government effectiveness, is widely recognized as a foundational pillar of sustainable development. Emara and Jhonsa (2014), focusing on the MENA region, found that improvements in rule of law and regulatory quality significantly boosted economic performance. In Sub-Saharan Africa, Beyene (2023) and Effiong et al. (2023) reported that higher scores on governance indicators are positively associated with GDP per capita, especially when supported by institutional reforms and democratic accountability. Within Nigeria, governance has emerged as a central determinant of macroeconomic outcomes. Abubakar (2020) and Adenuga (2023) revealed that governance indicators such as voice and accountability, political stability, and rule of law are significantly and positively related to economic growth. They argue that credible institutions not only attract investment but also ensure efficient resource allocation and service delivery. Similarly, Oyetade et al. (2024), applying the ARDL technique, confirmed that improved governance has both immediate and lasting effects on economic performance. Their findings suggest that governance plays a dual role facilitating policy effectiveness and providing the institutional infrastructure necessary for growth.

Governance as a Moderator Between FDI and Growth

Emerging empirical literature increasingly acknowledges the mediating and moderating role of governance in shaping the impact of FDI on economic growth. Rather than assuming a direct linear relationship, scholars such as Agbloyor et al., (2016) and Raza et al., (2019) argue that the benefits of FDI are conditional upon the institutional context. Using interaction terms in their models, these studies reveal that the positive effects of FDI are amplified in environments with strong institutions, effective regulatory frameworks, and low corruption. Their findings suggest that good governance not only attracts higher volumes of FDI but also enhances its efficiency and development impact.

Further support is provided by Bouchoucha and Yahyaoui (2020), who examined African countries and found a harmonious effect between FDI and governance indicators where both variables jointly improve economic growth outcomes. According to their study, institutional quality serves as a catalyst that unlocks the full developmental potential of FDI. Nonetheless, evidence from Nigeria is more cautious. Sule et al., (2023) found that governance does not significantly moderate the FDI growth relationship in Nigeria. They attribute this to persistent institutional weaknesses such as regulatory inconsistencies, political interference, and ineffective anti-corruption mechanisms. This finding reinforces the view that unless governance is strengthened, the ability of FDI to drive meaningful economic transformation remains limited.

3.0 Methodology

This study employs a quantitative research design using annual time series data spanning from 1996 to 2023. The choice of period is primarily informed by the availability of governance indicators, which are systematically compiled in the Worldwide Governance Indicators (WGI) database from 1996 onward. This timeframe also captures significant political, structural, and economic reforms in Nigeria, including democratic transitions and policy shifts toward investment liberalization. Data on Gross Domestic Product (GDP), inflation, and labour force participation were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, while data on foreign direct investment (FDI), capital formation, and exchange rate were retrieved from the World Bank's World Development Indicators (WDI). Governance variables including control of corruption, rule of law, government effectiveness, political stability, regulatory quality, and voice and accountability were obtained from the WGI database. The analysis employs the (ARDL) bounds testing technique, as proposed by Pesaran et al. (2009), which is appropriate when the data series are integrated at different orders I(0) and I(1). Two models are estimated in this study. The first, referred to as the baseline model, focuses on the direct effect of

FDI on economic growth while accounting for governance and other macroeconomic variables. It is specified as follows:

$$GDP_t = \beta_0 + \beta_1 FDI_t + \beta_2 GOV_t + \beta_3 GFC_t + \beta_4 LFP_t + \beta_5 REX_t + \beta_6 INF_t + \varepsilon_t \quad (3.1)$$

In this equation, GDP_t represents real Gross Domestic Product, the dependent variable and a proxy for economic growth; FDI_t is Foreign Direct Investment inflows as a percentage of GDP; GFC_t stands for Gross Fixed Capital Formation, which captures domestic investment; INF_t is the inflation rate (consumer price index), REX_t denotes the exchange rate (₦/US$). The error term μ_t captures unobserved influences.

Building on the baseline model, the second model introduces governance into the relationship as a moderating variable by including a governance index and an interaction term between FDI and governance. This enhanced model is expressed as:

$$GDP_t = \lambda_0 + \lambda_1 (FDI * GOV)_t + \lambda_2 GFC_t + \lambda_3 LFP_t + \lambda_4 INF_t + \lambda_5 REX_t + \varepsilon_t \quad (3.2)$$

Here, the interaction term FDI_t*GOV_t captures how governance conditions influence the effect of FDI on economic growth. The error term ε_t accounts for unobserved heterogeneity. The ARDL methodology is chosen for its robustness in analysing both the short-run and long-run relationships in small sample sizes and when variables exhibit mixed integration orders. Prior to model estimation, unit root tests were performed with the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests to determine the stationarity of the variables. The results confirmed that none of the variables were integrated at the second order, justifying the use of the ARDL bounds testing framework.

The choice of variables is grounded in both theoretical foundations and empirical evidence. FDI is included due to its potential to bring in capital, modern technology, and managerial expertise, all of which can enhance productivity and stimulate economic growth (Akinyemi et al., 2018; Dunning & Lundan, 1993). Governance is considered a key institutional factor that shapes the effectiveness of FDI absorption and utilization, with studies emphasizing its influence on investment outcomes, particularly in developing economies (Raza et al., 2019; Acemoglu & Robinson, 2012; North, 1992). The inclusion of gross fixed capital formation reflects domestic investment behaviour, while inflation and exchange rate serve as proxies for macroeconomic stability and international competitiveness, respectively both of which significantly affect the performance of foreign direct investments (Orji et al., 2023; Sule et al., 2023). This methodological approach is therefore expected to yield strong empirical insights on the context to which governance shapes the relationship between FDI and economic growth in Nigeria.

4.0 Results and Discussion

Table 4.1. Descriptive Statistics

	GDP	FDI	GOV	*GFC*	*LFP*	*REX*	*INF*
Mean	70224.54	1.2492	-1.1211	25.2139	59.7432	115.2489	13.1950
Median	49465.41	1.2249	0.000	25.515	60.0035	105.6749	12.3810
Minimum	4086.070	-0.0395	-1.2671	14.1700	58.311	69.1986	5.3880
Maximum	234425.9	2.9002	-1.0050	40.5500	60.422	273.0147	29.2683
Standard Dev.	65931.83	0.8515	0.0704	8.7097	0.5868	48.0072	5.4149
Skewness	0.9066	0.2661	-0.3365	0.2352	-0.9237	2.0379	1.1008
Kurtosis	2.8491	1.9544	2.3617	1.7909	2.6907	6.6866	4.3237
Count	**28**	**28**	**28**	**28**	**28**	**28**	**28**

Source: Author's computation

Table 4.1 summarizes the statistical characteristics of the study variables from 1996 to 2023. Real GDP exhibited wide fluctuations, reflecting Nigeria's volatile economic performance during the period, often shaped by oil price shocks, currency instability, and policy changes (Ozili, 2025; Sule et al., 2023). FDI inflows averaged 1.25% of GDP but were inconsistent, highlighting challenges in sustaining foreign investment due to institutional and macroeconomic uncertainties (UNCTAD, 2023; Orji et al., 2021). Governance indicators remained consistently low, suggesting persistent institutional weaknesses (Abubakar, 2020). Labour force participation was relatively stable, while domestic investment (GFCF) showed wide variation, indicating irregular capital formation. Exchange rates experienced significant volatility, and inflation remained in double digits on average, both underscoring macroeconomic instability (Adenuga, 2023; Ozegbe & Salami, 2023).

Table 4.2. Correlation Analysis

	GDP	FDI	GOV	GFC	INF	REX	INF
GDP	1						
FDI	-0.5129	1					
GOV	0.6277	-0.1069	1				
GFC	-0.1144	-0.2758	-0.603	1			
LFP	-0.9706	0.3382	-0.6944	-0.2589	1		
REX	-0.0252	-0.6248	0.0991	-0.4003	-0.1668	1	
INF	0.3038	-0.2524	-0.2184	0.2628	0.2511	0,1294	1

Source: Author's computation

The correlation results in Table 4.2 reveal that governance is moderately and positively associated with economic growth, reinforcing the view that institutional quality plays a crucial role in development (Emara & Jhonsa, 2014; Rodrik, 2006; North, 1992). Conversely, FDI exhibits a negative correlation with GDP, suggesting that foreign investment may not independently drive growth without strong institutional support, aligning with the findings of Giwa et al. (2020) and Ozili (2025). A notably strong negative relationship is observed between GDP and labour force participation, possibly reflecting structural inefficiencies in employment. Additionally, gross fixed capital formation correlates

negatively with governance, pointing to potential issues in domestic investment efficiency. Exchange rate volatility appears to deter FDI, while inflation shows a mild positive link with GDP, indicating possible inflationary effects during periods of economic expansion (Sule et al., 2023).

Unit Root and Structural Break Test

Table 4.3 Unit Root Test

	LEVEL		**FIRST DIFFERENCE**	
	PP	ADF	PP	**ADF**
lnGDP	-1.704 (0.418)	-2.064 (0.259)	-3.585 (0.013)**	-0.407 (0.014)**
FDI	-2.025 (0.275)	-1.369 (0.581)	-7.439 (0.000)***	-7.439 (0.000)***
GOVI	-1.779 (0.382)	-1.395 (0.569)	-4.714 (0.001)***	-4.694 (0.001)***
lnGFC	-1.170 (0.672)	-0.913 (0.768)	-3.278 (0.027)**	-3.278 (0.027)**
lnLFP	-0.792 (0.992)	-0.826 (0.795)	-3.991 (0.022)**	-3.807 (0.033)**
lnREX	-2.873 (0.062)*	-2.873 (0.062)*	-5.498 (0.000)***	-5.467 (0.000)***
INF	-4.597 (0.001)***	-4.597 (0.001)***	-9.659 (0.000)***	-4.008 (0.025)**

Source: Author's computation

The unit root tests, conducted using both ADF and Phillips-Perron methods, show that all variables are non-stationary at level except inflation, which is stationary at level. After first differencing, the remaining variables attain stationarity, indicating they are integrated of order one, I(1). Given the robustness of the Phillips-Perron test to serial correlation and heteroskedasticity, its results are prioritized in case of discrepancies. The combination of I(0) and I(1) variables justifies the application of the ARDL approach for subsequent estimation. Beyond conventional unit root testing, the Bai-Perron multiple structural break test was conducted to identify significant changes in the underlying relationships between FDI, governance, and economic growth over time.

Table 4.4 Multiple Structural Break

Break Test	**F-statistic**	**Critical Value****	**Break Detected**	**Break Year**
0 vs. 1 *	93.21397	8.58	Yes	**2002**
1 vs. 2 *	22.02294	10.13	Yes	**2006**
2 vs. 3 *	26.30027	11.14	Yes	**2011**
3 vs. 4 *	13.17177	11.83	Yes	**2019**
4 vs. 5	**0**	**12.25**	**No**	

Source: Author's computation

As presented in Table 4.4, four statistically significant breakpoints were detected in 2002, 2006, 2011, and 2019. These periods align with notable policy and macroeconomic events in Nigeria, such as the implementation of the National Economic Empowerment and Development Strategy (NEEDS) in 2002, banking sector reforms in 2006, post-crisis policy shifts in 2011, and the Economic Recovery and Growth Plan (ERGP) in 2019. These structural shifts reflect changing dynamics in investor confidence, institutional quality, and macroeconomic management. Accounting for such breaks strengthens the robustness of the ARDL estimation by ensuring that model parameters are not biased by unaccounted regime changes (Bai & Perron, 2003).

ARDL Bounds Test for Cointegration

To verify the existence of a long-run equilibrium relationship among the variables,

the ARDL bounds testing approach was adopted. This technique is suitable due to the mixed order of integration in the variables and allows for the inclusion of structural break dummies.

Table 4.5 Bound Test for Cointegration

F- Statistic	Significance Level	Bound Critical Value		K
		I(0)Bound	I(1) Bound	
9.7347	10%	1.70	2.83	**7**
	5%	1.97	3.18	
	2.50%	2.22	3.49	
	1%	2.54	3.91	

Source: Author's computation

The F-statistic result of 9.7347 in Table 4.5 exceeds the upper critical bounds at the 1%, 2.5%, 5%, and 10% significance levels, thus rejecting the null hypothesis of no cointegration. This confirms the presence of a stable long-run relationship between GDP, FDI, governance, and control variables (Pesaran et al., 2001).

ARDL Long-Run Estimates

Table 4.6 Estimated Long-Run Coefficients (ARDL)

Variables	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
FDI	0.0043	0.0190	0.2259	**0.8258**
GOV	0.0068	0.0146	0.4691	**0.6491**
GFC	0.2181	0.0914	2.3872	**0.0381**
LFP	0.1348	0.3490	0.3863	**0.7073**
LER	-0.1265	0.0454	-2.7855	**0.0193**
INF	0.0090	0.0030	2.9772	**0.0140**
DUM	**0.0404**	**0.0471**	**0.8594**	**0.4103**

Source: Author's computation

The ARDL model reveals that in the long run, foreign direct investment (FDI) has a positive but statistically insignificant effect on Nigeria's economic growth. This aligns with the findings of Ozili (2025) and Giwa et al. (2020), who argue that FDI, particularly in the extractive sectors like oil and gas often lacks strong linkages to the broader economy. Similarly, governance shows a positive but insignificant effect, suggesting that while institutional reforms are important, they may not translate into real economic gains without being backed by productive channels. Gross Fixed Capital Formation (GFC) has a positive and statistically significant impact, emphasizing the critical role of domestic investment in capital accumulation and infrastructure development. Exchange rate has a negative and significant effects on economic growth, implying that exchange rate instability and currency mismanagement limits long term productivity and investor confidence over time. Inflation has a positive and significant impact, which may reflect a context of moderate inflation supporting demand side growth. Labor Force Participation (LFP), however, remains statistically insignificant, pointing to inefficiencies in labour market engagement over time.

Table 4.7. Short-Run Dynamics (ECM Estimates)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP(-1))	-0.3681	0.1085	-3.3931	0.0069
D(FDI)	-0.0002	0.0124	-0.0133	0.9897
D(GOV)	0.0068	0.0084	-2.3536	0.0404
D(LGFC)	-0.1104	0.0470	0.8091	0.4373
D(LLFP)	-0.0106	0.2091	-0.5071	0.6231
D(LREX)	-0.0078	0.0260	-0.3020	0.7688
D(INF)	-0.0025	0.0016	-1.5745	0.1464
D(DUM)	0.0404	0.0222	1.8255	0.0980
ECM(-1)*	-0.0115	0.0010	-11.5062	0

$R^2 = 0.9269$ | Adj. $R^2 = 0.8925$ | DW-stat = 2.6489. **Source: Author's computation**

In the short run, the model presents a different dynamic. FDI and governance remain statistically insignificant, reinforcing that their impacts on economic output take time and depend on stronger institutional support. GFC has a negative but statistically insignificant effect in the short run, likely due to implementation delays and the time it takes for infrastructure investments to yield returns an interpretation consistent with Iyoha and Oriakhi (2008). Inflation which was significant in the long run, turns negative and insignificant in the short run, suggesting that volatility or unanticipated price changes may hinder output rather than support it in the immediate term. LFP remain insignificant, indicating that employment levels or labour absorption remain insufficient to drive immediate productivity. The error correction mechanism (ECM) coefficient of -0.0115 is low but significant, meaning only 1.15% of the deviation from long-run equilibrium is corrected annually. This slow rate of adjustment reflects Nigeria's structural bottlenecks and limited capacity of its institutions to respond quickly to economic shocks or policy interventions.

Bounds Test for the Interaction of FDI and Governance

Building upon earlier findings that FDI alone may not significantly influence GDP without institutional support, this section evaluates the interactive effect of FDI and governance (FDIGOV) on economic growth. To achieve this, the ARDL bounds test for cointegration was applied again, this time incorporating the interaction term and a dummy variable to account for structural breaks.

Table 4.8. Bounds Test for Cointegration on FDIGOV Interaction

F- Statistic	**Significance Level**	**Bound Critical Value**		**K**
		I(0)Bound	I(1) Bound	
19.0740	10%	1.7	2.87	**6**
	5%	2.0	3.24	
	2.50%	2.32	3.59	
	1%	2.66	4.05	

Source: Author's computation

As shown in Table 4.8, the F-statistic of 19.074 far exceeds the upper bounds at all significance levels, indicating a strong long-run equilibrium relationship between the interactive term (FDIGOV), governance, FDI, and GDP. This reinforces earlier evidence that governance plays a mediating role in enhancing FDI's growth effect.

Table 4.9. Long-Run ARDL Estimates with FDIGOV

Variables	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
FDIGOV	0.011	0.0039	2.7916	0.0492
GFC	0.1770	0.0536	3.3028	0.0299
LFP	0.2245	0.2051	1.0946	0.3352
REX	0.2846	0.0681	4.1814	0.0139
INF	0.0080	0.0014	5.6553	0.0048
DUM	0.0774	0.0186	4.1725	0.0140

Source: Author's computation

The interaction model introduces the FDIGOV term an interaction between Foreign Direct Investment (FDI) and governance which emerges as positive and statistically significant in the long run. This confirms that good governance plays a crucial enabling role in converting FDI into long-term economic gains. When institutions are strong reflected through rule of law, regulatory effectiveness, and corruption control FDI is more efficiently absorbed and contributes meaningfully to economic growth. This aligns with the arguments of Bouchoucha and Yahyaoui (2020), Emara and Jhonsa (2014), and Agbloyor et al. (2016), who highlight the conditional nature of FDI effectiveness. Supporting this, Gross Fixed Capital Formation (GFC) maintains its positive and significant long-run effect, suggesting that capital investment continues to serve as a growth engine, particularly in environments where governance structures ensure productive allocation. Additionally, exchange rate stability contributes positively and significantly, indicating that strong governance enhances macroeconomic management and investor confidence. In contrast, inflation and labour force participation remain insignificant in the long run, implying that their longer-term effects on growth are subdued unless tied to broader institutional reforms.

Table 4.10 Short-Run ARDL Estimates with FDIGOV

Variables	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
D(FDIGOV)	0.015258	0.002094	7.287799	0.0019
D(GFCF)	-0.200202	0.019875	-10.07306	0.0005
D(LFP)	0.224524	0.077561	2.894812	0.0443
D(LER)	0.284562	0.017461	16.29728	0.0001
D(INF)	0.000365	0.000554	0.658472	0.5462
D(DUM)	-0.020939	0.009515	-2.200524	0.0926
ECM(-1)*	-0.121161	0.006632	-18.27006	0.0001

$R^2 = 0.9952$ | Adj. $R^2 = 0.9884$ | DW = 3.0547. **Source: Author's computation**

In the short run, the FDIGOV interaction term remains strongly positive and significant, emphasizing that governance quality amplifies the immediate impact of FDI, likely through better investor protection, reduced delays, and improved regulatory enforcement. Interestingly, GFCF has a negative and significant effect, suggesting that capital projects may involve short-run inefficiencies or take time before contributing to output. In contrast, Labor Force Participation (LFP) is positive and significant, reflecting that good governance may enhance short-term labour productivity. The exchange rate continues to

play a positive role, indicating that stable currency regimes attract or support investment flows in the near term. Inflation is statistically insignificant, showing minimal short-run effect. Importantly, the Error Correction Mechanism (ECM) coefficient of -0.1212 is negative and highly significant, indicating a rapid adjustment rate with over 12% of disequilibrium corrected each year. This strong adjustment speed reinforces that governance not only enhances the short-run responsiveness of the economy but also strengthens its convergence back to equilibrium following shocks. Overall, these short-run dynamics affirm that institutional quality not only enhances long-run growth mechanisms but also improves the responsiveness and resilience of the economy in the short term.

Table 4.11: Diagnostic Test Results

Test	F-statistics (Baseline)	Obs*R^2 (Baseline)	p-value (Baseline)	F-statistics (FDI*GOV)	Obs*R^2 (FDI*GOV)	P-value (FDI*GOV)
Normality		---	0.8212	---	---	**0.8814**
Serial Correlation	1.5705	7.3301	0.2659	4.8894	20.7551	**0.1698**
Heteroskedasticity	0.8274	15.4780	0.6454	0.7228	20.8743	**0.7247**
RAMSEY RESET	**0.2043**	**---**	**0.6620**	**0.8136**		**0.4335**

Source: Author's computation

The results of the diagnostic tests, as shown in the combined table, confirm that both the baseline and interaction models are statistically robust and well-specified. The Jarque-Bera test indicates that the residuals are normally distributed in both models ($p > 0.82$), while the Breusch-Godfrey test confirms the absence of serial correlation ($p > 0.16$). Likewise, the Breusch-Pagan test results reveal no heteroskedasticity ($p > 0.64$), suggesting stable variance of the residuals. Furthermore, the Ramsey RESET tests show no signs of functional form misspecification (p-values of 0.662 and 0.434), supporting the validity of the model structures. These results collectively affirm that the models meet the necessary econometric assumptions, reinforcing the reliability of the estimated coefficients for both short- and long-run analyses.

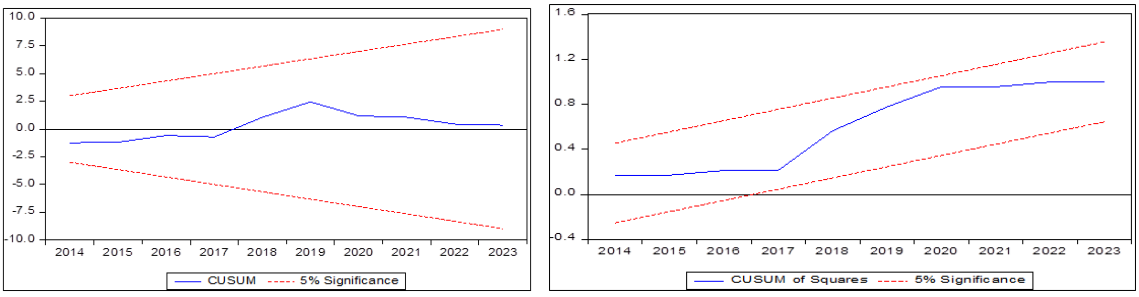


Figure 4.1 CUSUM And CUSUM Square (Baseline). Source: Author's computation

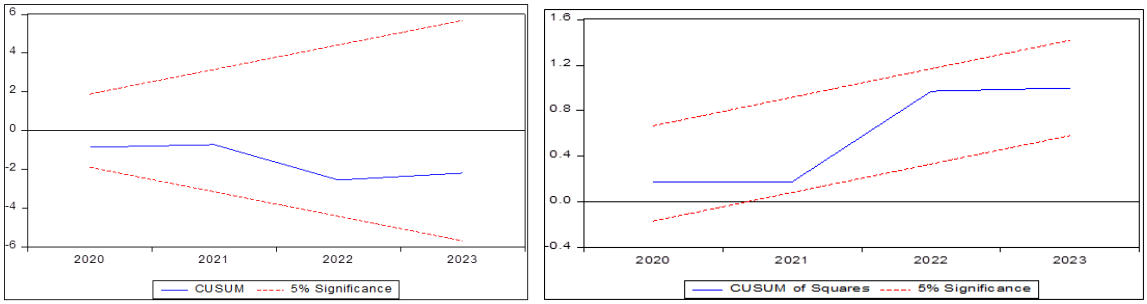


Figure 4.2 Interaction of FDI*GOV. Source: Author's computation

The stability of the ARDL estimate was examined through the CUSUM and CUSUMSQ tests. In both cases, the test plots remained within the 5% critical limits throughout the study period, indicating no structural instability. This suggests that the model coefficients remained stable over time, and that there were no significant shifts in the relationship among the variables. Thus, the models are reliable for forecasting and policy interpretation, reinforcing the robustness of both the baseline and interaction specifications.

5.0 Conclusion and Recommendation

This study concludes that while Foreign Direct Investment (FDI) holds significant potential to enhance Nigeria's economic growth particularly in the short term its transformative impact is conditional on the presence of robust governance structures. In the absence of transparent, accountable, and efficient institutions, FDI tends to concentrate in capital intensive, low impact sectors such as oil and gas, limiting its contribution to inclusive development. Moreover, long term economic benefits from FDI depend not only on capital inflows but also on broader macroeconomic stability, especially in terms of inflation control and exchange rate management. Human capital and infrastructure investments further require sustained support, as their contributions to growth often materialize over time.

To realize the full developmental potential of FDI, the study recommends that Nigeria adopt an integrated policy strategy cantered on institutional reform and economic diversification. Strengthening governance through anti-corruption measures, efficient contract enforcement, and regulatory digitalization will help attract and retain quality investments. Improving the ease of doing business by streamlining administrative processes, offering targeted tax incentives, and investing in infrastructure such as transport and energy systems can also shift FDI inflows from extractive industries to more productive sectors like manufacturing and agriculture. The development of Special Economic Zones (SEZs) and industrial clusters will further enhance sectoral linkages and local value addition.

Macroeconomic policy coherence is equally essential for long-term planning and investment confidence. Stable exchange rates, prudent fiscal management, and inflation control are necessary to support investor expectations and maintain competitiveness. Additionally, sustained investment in education, healthcare, and vocational training will improve labour productivity and strengthen the absorptive capacity of the economy to utilize foreign capital effectively. Ultimately, a long-term national development agenda focusing on governance, economic diversification, and inclusive growth will signal Nigeria's readiness to harness FDI as a tool for broad-based and sustainable economic transformation.

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