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Impact of foreign direct investment on economic growth in Nigeria: Mediating role of institutional quality

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Abstract: This study is motivated by the persistent disconnection between rising Foreign Direct Investment (FDI) inflows and Nigeria's economic development, with a focus on understanding the mediating role of institutional quality. The primary aim is to investigate how political rights and civil liberties influence the relationship between FDI and economic growth in Nigeria. 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, labor force participation, and financial development. The findings reveal that FDI negatively affects economic growth by up to 56.4% in the short run and 30.6% in the long run. However, political rights positively moderate the impact of FDI, improving growth outcomes by approximately 123% in the long run. Conversely, civil liberties exhibit a negative moderating effect in both time horizons. The results underscore that without institutional reform, FDI may not deliver its expected economic benefits. The study recommends that Nigeria strengthen its institutional frameworks—particularly political rights—enhance transparency, and develop absorptive capacity to fully harness FDI's growth potential and foster inclusive, long-term economic development.

Keywords: *Civil Liberties, Economic Growth, Foreign Direct Investment, Institutional Quality, Political Rights.*

1. Introduction

Over the past four decades, Nigeria's economic trajectory has been shaped by an intricate interplay between foreign direct investment (FDI), institutional quality, and macroeconomic conditions. As Africa's most populous country and one of its largest economies, Nigeria has experienced alternating economic growth and contraction cycles, heavily influenced by shifts in governance, oil prices, and investor sentiment. The 1980s were marked by economic decline and political repression, with GDP per capita falling from $1,856 in 1981 to $1,459 in 1983 amid military coups and restricted civil liberties [1, 2]. By contrast, the return to democratic governance in 1999 and subsequent economic reforms in the early 2000s fostered institutional stability and drove economic expansion, pushing per capita income above $2,000 by 2006 [3]. These historical shifts suggest a close connection between governance quality and Nigeria's economic performance.

Despite Nigeria's appeal as an investment destination driven by its natural resources and large domestic market, it has struggled to harness FDI effectively for sustainable growth. While FDI inflows peaked at $8.19 billion in 2008 during a period of economic reform and investor optimism, they fell sharply to just $120 million in 2022 due to policy inconsistencies, insecurity, and weak institutions [2]. Several empirical studies have documented that FDI alone does not automatically translate into economic development; instead, the effectiveness of FDI is conditional on the strength of the host country's institutions [4, 5]. In the Nigerian context, factors such as corruption, poor regulatory

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frameworks, and unstable governance have undermined the capacity of FDI to deliver inclusive growth [6, 7]. These trends raise a fundamental research question: To what extent does institutional quality mediate the impact of FDI on Nigeria's economic growth?

In addressing this question, this study aims to empirically investigate the impact of FDI on economic growth in Nigeria while evaluating the mediating role of institutional quality. Specifically, it will (i) assess the direct relationship between FDI and GDP per capita, (ii) examine the influence of institutional quality (proxied by political rights and civil liberties) on economic growth, and (iii) determine the interactive effect of FDI and institutional quality on Nigeria's economic performance. Additional explanatory variables, such as financial development and labour force participation, will be incorporated to control for broader macroeconomic conditions. The study adopts a time-series econometric approach covering the period 1981 to 2022, enabling a comprehensive examination across multiple political and economic regimes, including military rule, civilian transitions, economic liberalization, and global shocks such as the 2008 financial crisis and the COVID-19 pandemic.

The study covers the period of 1981–2022. This period captures critical structural shifts in Nigeria's institutional and economic framework—ranging from austerity programs and privatization to democratic reforms and national development plans. Using data from reputable sources such as the World Development Indicators and Freedom House, the study provides a robust framework to examine both short-run volatility and long-run trends in the FDI-growth nexus. Moreover, the span allows the researcher to capture how institutional transformations—such as the return to civilian rule in 1999 and the anti-corruption drives of the 2000s—have shaped investor confidence and economic output [8, 9]. These dimensions are crucial to understanding how Nigeria can strengthen its absorptive capacity to optimize the benefits of FDI.

This study makes several contributions to the existing body of knowledge. It extends the empirical literature by integrating institutional quality into the FDI-growth relationship, moving beyond linear models to explore interaction effects. Unlike earlier studies with limited temporal scope, this study uses over four decades of data to provide a historical and policy-relevant perspective on Nigeria's investment-growth trajectory. It also aligns with the Endogenous Growth Theory [10] New Institutional Economics [11] and the Absorptive Capacity Theory [12] which collectively argue that domestic institutions play a pivotal role in converting external inflows into sustained economic progress. Through this lens, the study advances academic discourse and provides actionable insights for policymakers, donors, and investors.

The findings from this study are expected to offer vital policy implications. If institutional quality significantly mediates the FDI-growth relationship, then Nigeria's economic strategy should prioritize improving governance, transparency, and regulatory frameworks. Strengthening institutions would increase investor confidence and improve the economy's capacity to effectively absorb and utilize foreign capital. Furthermore, the government should complement FDI promotion policies with reforms to enhance political stability, civil liberties, and anti-corruption mechanisms. These institutional improvements can serve as catalysts for inclusive growth and reduce Nigeria's over-reliance on volatile oil revenues. This study will provide empirical backing for integrated policies that treat governance reform as a necessary condition—not merely a complementary measure—for leveraging FDI for long-term economic development.

2. A Brief Review of Economic Growth, FDI and Institution Quality

The trends illustrated in Figure 1 reveal a deep connection between Nigeria's economic performance and institutional quality from 1981 to 2022. During the politically unstable 1980s, Nigeria saw a steep decline in GDP per capita and a deterioration in political rights and civil liberties. Institutional repression, military coups, and poor economic management contributed to this downturn. In contrast, the late 1990s ushered in a democratic transition that led to gradual improvements in governance and modest economic growth. The early 2000s marked a period of relative institutional stability, coinciding with rising per capita income and steady political rights scores, highlighting how improved institutional

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conditions facilitated more favorable economic outcomes. However, the 2010s brought both a peak and a decline—while GDP per capita reached a high in 2015, institutional weaknesses persisted, and economic gains were undercut by falling oil prices and governance concerns.

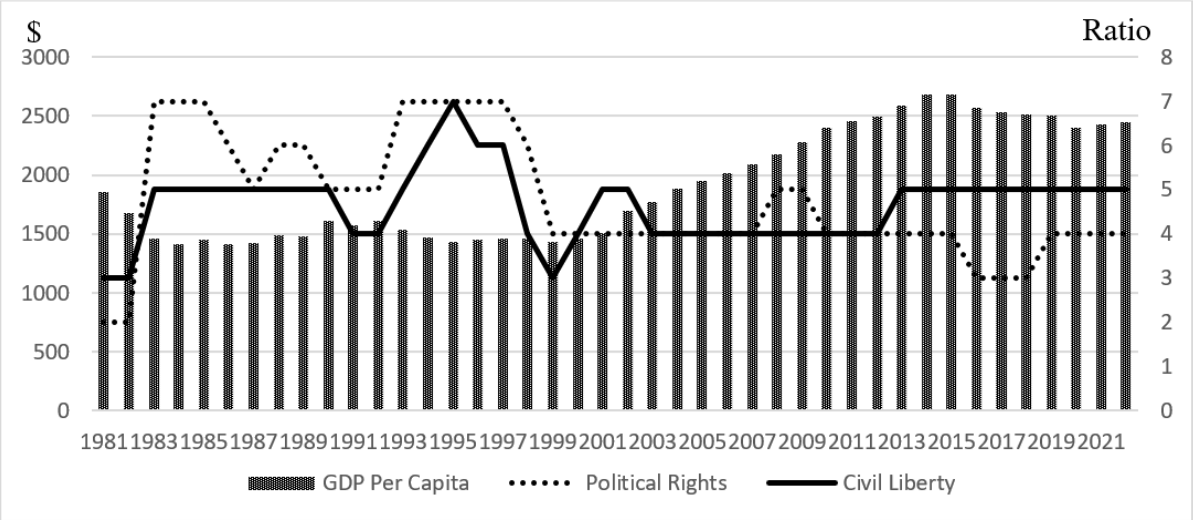

Figure 1.
Institutional Quality and Economic Growth in Nigeria.
Source: WDI and Freedom House

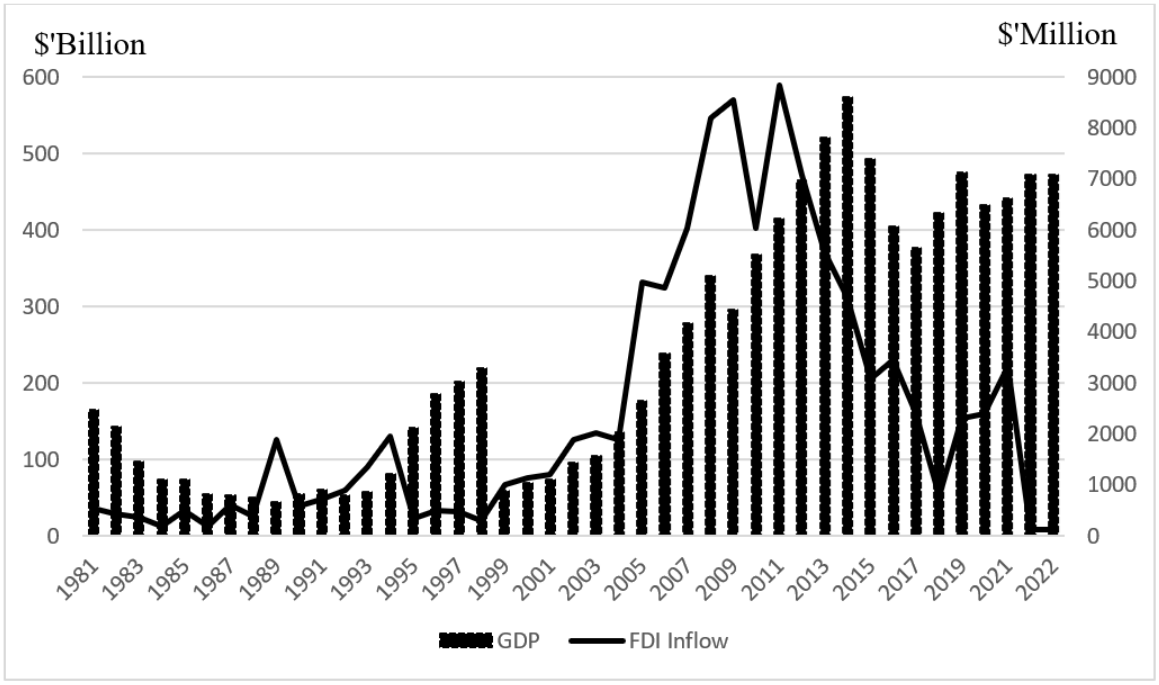

Figure 2.
FDI and Economic Growth in Nigeria.
Source: WDI.

Similarly, Figure 2 tracks the relationship between economic growth and FDI inflows in Nigeria. The 1980s were marked by severe economic decline and low FDI inflows due to global oil shocks and

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domestic instability. However, structural adjustment programs and market reforms in the late 1980s led to a brief economic recovery and a spike in FDI. The 1990s were characterized by fluctuations in both GDP and FDI, with the return to civilian rule in 1999 improving investor sentiment. The 2000s saw a dramatic rise in both GDP and FDI, peaking in 2008 due to high oil prices and investor optimism driven by reforms. This boom demonstrated that a conducive policy environment and governance improvements could attract significant foreign investment. Yet, post-2014, FDI became volatile despite GDP growth, reflecting growing concerns over Nigeria's business climate, insecurity, and regulatory inconsistencies.

In the 2020s, Nigeria's GDP remained relatively stable, hovering around $432–$473 billion, even amid global shocks like COVID-19. However, FDI inflows sharply declined—falling to a mere $120 million in 2022—despite the absence of a significant drop in GDP, highlighting a disconnect between macroeconomic stability and investment confidence. This suggests that institutional and policy shortcomings, rather than output levels, may be deterring investment. Persistent issues such as corruption, security challenges, and an unpredictable policy environment have contributed to Nigeria's declining attractiveness to foreign investors. These insights underscore the critical need for targeted governance reforms, improved regulatory frameworks, and enhanced institutional capacity if Nigeria aims to harness FDI for long-term, inclusive economic growth.

3. Literature Review

3.1. Theoretical Background

This study is anchored on Endogenous Growth Theory, Institutional Economics, and Absorptive Capacity Theory. The relevance of Endogenous Growth Theory, Institutional Economics, and Absorptive Capacity Theory to the study of the impact of FDI on economic growth in Nigeria, mediated by institutional quality, is well-supported in economic literature. According to Romer [10] and Lucas Jr [13] Endogenous Growth Theory asserts that long-term economic growth is driven by internal mechanisms such as human capital, innovation, and investment, including foreign capital. FDI enhances growth through capital accumulation, technological transfer, and productivity spillovers—all of which depend on domestic conditions. Financial development and labour force participation, key variables in the study, also align with the theory's emphasis on factors that influence sustained productivity and income levels. Thus, the theory provides a foundational rationale for examining how FDI, institutional quality, and domestic economic conditions contribute jointly to Nigeria's economic growth trajectory [14].

Institutional Economics [11] further justifies the study's inclusion of institutional quality as a mediating variable. It posits those institutions—such as legal frameworks, political stability, and governance quality—shape the efficiency of markets and the effectiveness of investment. Numerous empirical studies (e.g., [3-5]) show that weak institutions often undermine the positive effects of FDI by increasing uncertainty and transaction costs. Furthermore, the Absorptive Capacity Theory [12] supports the study's hypothesis that the growth impact of FDI is not automatic but conditional on the host country's institutional strength and policy framework. This theory explains the moderating role of institutions—captured through the interaction term (FDI × INST)—as essential for maximizing the benefits of FDI. When institutions are robust, they enhance learning, innovation, and regulatory effectiveness, allowing the economy to assimilate better and leverage foreign investments [7, 15].

3.2. Empirical Review

The relationship between Foreign Direct Investment (FDI) and economic growth in Africa, particularly in Nigeria, has become increasingly centered on the mediating influence of institutional quality. Adegboye, et al. [3] emphasize that weak institutions in sub-Saharan Africa (SSA) hinder the optimal absorption of FDI, leading to underutilization of domestic resources and skewed sectoral development. Jude and Levieuge [4] support this by demonstrating through a panel smooth transition model that FDI only yields positive growth effects when institutional quality surpasses a critical

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threshold. Similarly, Hayat [5] finds that both FDI and institutional quality individually and jointly enhance growth in low- and middle-income countries but not high-income countries, where FDI dampens growth. Fagbemi and Bello [16] delve deeper into SSA and reveal that despite the region's increasing FDI inflows, poor governance—marked by corruption and regulatory inefficiencies—undermines potential growth benefits. These studies affirm that institutional quality is not just a passive environment but an active facilitator or inhibitor in the FDI-growth equation.

In further empirical support, Dada and Abanikanda [6] provide robust evidence from Nigeria indicating that FDI alone does not significantly drive growth unless coupled with institutional reforms. They used seven institutional indicators to reveal that interactions between FDI and institutional dimensions like government effectiveness and rule of law result in growth-enhancing effects. Okoh [8] arrives at a similar conclusion in a broader African context, showing that political stability and corruption control significantly influence FDI's positive role in sustainable economic development. Wang et al. (2022) extend this analysis by using FMOLS and VECM methods to show that institutional quality promotes economic growth and environmental quality in non-oil-producing African countries and that a two-way causal relationship exists between FDI and economic growth when institutions are strong. Meanwhile, Onuigbo [17] uses an ARDL framework to confirm that institutions significantly strengthen both the short- and long-run FDI-growth linkage in Nigeria, suggesting the need for institutional capacity-building post-COVID-19.

The interaction of institutional quality with broader macroeconomic policies is also addressed in several studies. Aluko, et al. [18] explore the mediating role of economic freedom and reveal that FDI only significantly enhances growth in countries where economic freedom exceeds a threshold, underscoring the importance of open and rule-based environments. Yeboua [19] using a panel smooth transition regression on African countries, quantifies institutional thresholds across various dimensions—democratic accountability, corruption, and bureaucracy quality—below which FDI negatively impacts growth. Chen, et al. [20] analysing Belt and Road countries, confirm that improved institutional environments significantly enhance FDI facilitation and that the Belt and Road Initiative amplified this effect. Similarly, Miao, et al. [21] note that China–Africa trade and Chinese FDI only contribute positively to growth when accompanied by institutional improvements, emphasizing the need for synchronized governance and investment strategies.

In regional and comparative contexts, Ullah, et al. [15] assess 80 countries across Asia, Latin America, and SSA and find that institutional quality universally strengthens the FDI-growth nexus. Interestingly, political stability and corruption control are the most influential dimensions, while regulatory quality and government effectiveness exhibit weak or negative effects in SSA. Asamoah, et al. [22] further find that FDI can harm growth in SSA unless supported by strong institutional mechanisms. They emphasize the positive roles of trade openness and human capital but argue that without strong institutions, FDI alone may not deliver long-term development dividends. Shittu, et al. [23] reinforce this with findings from MENA countries, where institutional quality reduces the negative impact of FDI in the short run and amplifies its growth effect when interacted with natural resource endowments. These insights point to a broader pattern: institutional reforms are preconditions for capitalizing on FDI's developmental potential.

Finally, several studies examine the dynamic and causal relationships between FDI, institutional quality, and other macroeconomic indicators. Abdullahi, et al. [24] examine how governance affects the trade-growth nexus in Nigeria, revealing mixed short- and long-term effects depending on the quality of institutions. Huynh, et al. [25] present a multidirectional causality model in which FDI not only boosts institutional quality by formalizing the economy but is also drawn in by strong institutions, creating a reinforcing loop. Miao, et al. [9] focus on Chinese FDI and find that high governance standards strengthen its impact on both economic and domestic investment growth in Africa. Chengying, et al. [26] add to this by revealing that national absorptive capacity mediates the effect of institutional quality on FDI inflow, particularly in developing countries, through mechanisms such as corruption control, political stability, and regulatory quality. These findings reinforce that institutional

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development is both a prerequisite and a product of FDI-led economic transformation, making it a pivotal factor in policy design.

Despite the extensive literature highlighting the importance of institutional quality in the FDI–economic growth nexus, several critical gaps remain. First, while many cross-country studies (e.g., [4, 7, 15]) establish the conditional nature of FDI's effectiveness on institutional strength, there is a paucity of longitudinal country-specific analyses—particularly for Nigeria—that span multiple political and economic regimes. Most existing studies either aggregate African economies or examine short-run dynamics, thereby overlooking Nigeria's unique historical and institutional transformations from 1981 to 2022. Second, although interaction terms between FDI and institutions are occasionally used (e.g., Dada and Abanikanda [6]), there is limited integration of multiple institutional dimensions—such as political rights and civil liberties as governance indicators—within a single dynamic framework. Third, few studies combine theoretical grounding in Endogenous Growth, Institutional Economics, and Absorptive Capacity theories to holistically capture how institutional context moderates FDI-led growth. Lastly, while recent research addresses FDI's effect on growth, comprehensive models that account for financial development and labour force participation as absorptive factors remain rare. This study fills these gaps by offering a Nigeria-specific, theory-driven, and data-rich analysis of the mediating role of institutional quality in the FDI–growth relationship over four decades, incorporating multiple control variables and addressing both direct and interactive effects.

4. Methodology

4.1. Model Specification

In assessing the mediating role of governance on the impact of FDI on economic growth, Fagbemi and Bello [16] used the following base econometric model:

$$GPC_t = \alpha_0 + \beta_1 \mathrm{FDI}_t + \beta_2 IST_t + \beta_4 TRP_t + \mu_t \quad (1)$$

Where GPC represents GDP Per Capita, FDI stands for Foreign Direct Investment; IST stands for Institutional Quality: Civil Liberty (CL) and Political Rights (PR); TRP means trade openness. α = Constant β = Coefficients or Regression parameters of the model, μ = Disturbance term or Error Term, which captures the effects of other factors or variables on a dependent variable but not included in the model, and t = time.

This study considers Labour Force participation rate (LBF) and Financial Development (FDD) as control variables while dropping trade openness. Labour Force Participation Rate (LBF) and Financial Development (FDD) are included as control variables due to their strong theoretical and empirical links to economic growth, particularly within the endogenous growth framework. LBF captures the economy's productive capacity, while FDD reflects the efficiency of financial intermediation (measured as Credit to Private Sector). Though relevant, trade openness (TRP) is excluded to avoid multicollinearity and ensure model parsimony, as FDI and institutional quality indirectly capture trade-related governance effects. Thus:

$$GPC_t = \alpha_0 + \beta_1 \mathrm{FDI}_t + \beta_2 IST_t + \beta_4 LBF_t + \beta_5 \mathrm{FDD}_t + \mu_t \quad (2)$$

This can be transformed to logarithm form as follows:

$$lnGPC_t = \alpha_0 + \beta_1 ln\mathrm{FDI}_t + \beta_2 lnIST_t + \beta_4 lnLBF_t + \beta_5 ln\mathrm{FDD}_t + \mu_t \quad (3)$$

Following Fagbemi and Bello [16] FDI and Institutional quality have interacted to ascertain the mediating role of institutional quality on the impact of FDI on economic growth.

$$lnGPC_t = \alpha_0 + \beta_1 ln\mathrm{FDI}_t + \beta_2 lnIST_t + \beta_4 lnLBFP_t + \beta_5 ln\mathrm{FDD}_t + \beta_5 ln(\mathrm{FDI} * \mathrm{IST})_t + \mu_t \quad (4)$$

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Table 1.
Variables, Sources and Expectations.

Variables	Expectations	Source
Economic Growth: GDP per Capita (GPC)	Dependent Variable	WDI
Foreign Direct Investment Inflow (FDI)	Positive	WDI
Institutional Quality (IST): Civil Liberty (CL) and Political Rights (PR)	Positive	Freedom House
Workforce (aged population 15-64 as a percentage of total (LBF)	Positive	WDI
Financial Development (FDD)	Positive	WDI

4.2. Techniques of Data Analysis

The Autoregressive Distributed Lag (ARDL) model, proposed by Pesaran and Shin [27] and Pesaran, et al. [28] is employed in this study to analyse the short- and long-run effects of trade openness, institutional quality, and foreign direct investment (FDI) on Nigeria's economic growth. ARDL is preferred due to its robustness when handling variables integrated at different levels, I(0) or I(1), unlike traditional cointegration techniques [24]. It allows for the simultaneous estimation of short- and long-run coefficients (Abdullahi et al., 2024; Azu et al., 2024) and is suitable for small samples [29]. To check the stationarity of variables, the Augmented Dickey-Fuller (ADF) test will be applied before model estimation. While not mandatory, it ensures no variable is I(2), which would invalidate the ARDL bounds test. Cointegration will be tested using the F-statistic, which must exceed the upper bound to confirm a long-term relationship. A negative and statistically significant error correction term (ECM-1), as noted by Banerjee, et al. [30] will further validate long-run convergence. EViews software was used for estimation and diagnostics.

$$\Delta lnGPC_t = \beta_0 + \beta_1 lnGPC_{t-i} + \beta_2 lnFDI_{t-i} + \beta_3 lnINST_{t-i} + \beta_5 lnLBF_{t-i} + \beta_6 lnFDD_{t-i} + \sum_{i=0}^{p} \beta_7 \Delta lnGPC_{t-i} + \sum_{i=0}^{p} \beta_8 \Delta lnFDI_{t-i} + \sum_{i=0}^{p} \beta_9 \Delta lnINST_{t-i} + + \sum_{i=0}^{p} \beta_{11} \Delta lnLBF_{t-i} + \sum_{i=0}^{p} \beta_{12} \Delta lnFDD_{t-i} + ECM + \mu_t \quad (3)$$

In another dimension, to estimate the role of institutional quality on the relationship between the FDI and economic growth in Nigeria. Thus, the estimated ARDL model is as follows:

$$\Delta lnGPC_t = \beta_0 + \beta_1 lnGPC_{t-i} + \beta_2 lnFDI_{t-i} + \beta_3 lnINST_{t-i} + \beta_4 lnLBF_{t-i} + \beta_5 lnFDD_{t-i} + \beta_6 \ln (FDI * INST)_{t-i} + \sum_{i=0}^{p} \beta_7 \Delta lnGPC_{t-i} + \sum_{i=0}^{p} \beta_8 \Delta lnFDI_{t-i} + \sum_{i=0}^{p} \beta_9 \Delta lnINST_{t-i} + \sum_{i=0}^{p} \beta_{10} \Delta lnLBF_{t-i} + \sum_{i=0}^{p} \beta_{11} \Delta lnFDD_{t-i} + \sum_{i=0}^{p} \beta_{12} \Delta \ln (FDI * INST)_{t-i} + ECM + \mu_t \quad (6)$$

Table 2.
Summary Statistics.

	GPC	PR	CL	FDI	LBF	FDD
Mean	1504.5	4.738	4.643	2.47E+9	71444714	9.497
Median	1663.03	4	5	1.61E+9	68372510	8.242
Maximum	3200.9	7	7	8.84E+9	1.18E+08	19.63
Minimum	474.5	2	3	1.20E+8	39546651	4.958
Std. Dev.	805.9	1.4152	0.821	2.53E+9	2319381	3.587
Skewness	0.211	0.3159	0.202	1.18	0.3852	0.951
Kurtosis	1.806	2.2733	3.608	3.246	1.9905	3.374
Jarque-Bera	2.808	1.6227	0.932	9.849	2.8222	6.578
Probability	0.246	0.4443	0.628	0.007	0.2439	0.037
Sum	63191	199	195	1.04E+1	3.00E+09	398.9
Sum Sq. Dev.	266270	82.12	27.64	2.63E+2	2.21E+16	527.54
Observations	42	42	42	42	42	42

5. Results and Discussion

Table 2 presents the summary statistics for key variables used in the study, including GDP per capita (GPC), Foreign Direct Investment (FDI), and Institutional Quality, proxied by Political Rights (PR) and Civil Liberties (CL). The average GPC is approximately $1,504.5, with a wide dispersion (Std.

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Dev. = 805.9), indicating substantial fluctuations in Nigeria's economic performance over the study period. The mean FDI inflow is about $2.47 billion, with a maximum of $8.84 billion, reflecting periods of high investor interest. However, the high standard deviation suggests volatility in FDI inflows. Institutional quality indicators—PR (mean = 4.738) and CL (mean = 4.643)—suggest moderate restrictions on political and civil freedoms on average, with PR peaking at 7 (least free). The Jarque-Bera test confirms non-normality in FDI and financial development variables ($p < 0.05$), implying the presence of outliers or asymmetries. Overall, the data show significant variability in economic performance, institutional quality, and capital inflows, underscoring the dynamic and complex nature of Nigeria's development environment between 1981 and 2022.

Table 3.
Correlation Matrix.

Variables	LNGPC	LNPR	LNCL	LNFDI	LNLBF	LNFDD
LNGDPP	1	-0.4098	-0.0311	0.4113	0.6380	0.6316
LNPR	-0.4098	1	0.5904	-0.3060	-0.3757	-0.3465
LNCL	-0.0311	0.5904	1	-0.2173	0.0894	-0.0723
LNFDI	0.4113	-0.3060	-0.2173	1	0.5902	0.6466
LNLBF	0.6380	-0.3757	0.0894	0.5902	1	0.8348
LNFDD	0.63166	-0.3465	-0.0723	0.6466	0.8348	1

Table 3 presents the correlation matrix showing the linear relationships among the study variables. GDP per capita (LNGPC) positively correlates with FDI inflows (0.4113), indicating that higher foreign investment is associated with improved economic performance. Similarly, GDP per capita shows strong positive correlations with labour force (0.6380) and financial development (0.6316), underscoring the importance of productive labour and credit access in driving economic growth. On the other hand, institutional quality indicators—political rights (LNPR) and civil liberties (LNCL)—have negative correlations with GDP per capita (−0.4098 and −0.0311, respectively), suggesting that lower political restrictions (i.e., better institutional quality) are generally associated with higher income levels. The negative correlation between political rights and FDI (−0.3060) further implies that weaker political institutions may discourage investment. These findings support the hypothesis that institutional conditions significantly influence FDI and economic growth and emphasize the importance of improving governance to enhance Nigeria's development trajectory.

5.1. Unit Root Test and Lag Selection

Table 4 presents the Augmented Dickey-Fuller (ADF) unit root test results, revealing a mix of integration orders. GDP per capita (LNGPC) and FDI inflows (LNFDI) are stationary at level I(0). At the same time, political rights (LNPR), civil liberties (LNCL), labour force (LNLBF), and financial development (LNFDD) are stationary at first difference I(1). This mix justifies the use of the ARDL model, which is appropriate when variables are integrated at different levels, provided none is I(2). The significant p-values at first difference confirm that all series become stationary after differencing, ensuring validity for further cointegration analysis. Given the variables are stationary at either level or first difference, the use of ARDL estimation as proposed is justified.

Lag selection is crucial in ARDL modelling. Based on VAR criteria, lag four was chosen, supported by Final Prediction Error (FPE), Akaike Information Criterion (AIC) and Hannan-Quinn information (HQ) criteria. In contrast, Schwarz information criterion (SC) and Likelihood-Ratio (LR) suggested shorter lag lengths.

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Table 4.
Augmented Dickey-Fuller (ADF) Unit Root Test Result.

	Level		Ist difference		Order of
Variables	**t-statistics**	**p-value**	**t-statistics**	**p-values**	**integration**
LNGPC	-3.2129	0.0274	-8.2570	0.0000	I (0)
LNPR	-0.6842	0.8375	-5.4823	0.0001	I (1)
LNCL	-1.3700	0.5856	-3.9265	0.0047	I (1)
LNFDI	-4.0004	0.0038	-8.0229	0.0000	I (0)
LNLBF	2.6224	1.0000	-3.8973	0.0051	I (1)
LNFDD	-1.2246	0.6527	-9.2471	0.0000	I (1)

5.2. Bound Test for Cointegration

The ARDL bound test confirms a long-run relationship between economic growth, institutional quality, and FDI in Nigeria. Two equations were estimated: the main and interaction models between institutional quality and FDI. In both cases, the F-statistics exceeded the upper critical bounds at the 1% significance level, establishing cointegration [28]. The error correction terms (ECM) were negative, statistically significant and fell within the expected range of -1 to 0, indicating stable long-run dynamics. The main model showed a relatively high speed of adjustment at 126%, while the interaction model indicated a moderate adjustment speed of 99.4%. Following Banerjee, et al. [30] these outcomes suggest robust convergence to long-run equilibrium and no signs of instability or structural breaks in the data.

Table 5.
Summary of Cointegration Bound Tests Result.

F-statistic	4.771224	EC_{M-1}	-1.25647***	(-9.09402)
F-statistic	7.517809	EC_{M-1}	-0.99439***	(-9.176026)
Significant level		10%	5%	1%
F-Bounds Test	Lower bound	1.99	2.27	2.88
	Upper bound	2.94	3.28	3.99

Note: the number in parenthesis represents t-statistics, *** signifies 1% level of significant, F-statistics is determined with restricted constant and no trend.

5.3. Short Run and Long Estimation

The ARDL Error Correction Regression results in Table 6 show important dynamics regarding the short-run impacts of foreign direct investment (FDI), political rights (PR), and civil liberties (CL) on economic growth in Nigeria. FDI consistently exhibits a strong and statistically significant negative effect across the current and three lagged periods. The coefficients for D(LNFDI), D(LNFDI(-1)), D(LNFDI(-2)), and D(LNFDI(-3)) are all negative (ranging from -0.132 to -0.564) and highly significant ($p < 0.01$). This indicates that, in the short run, increased FDI inflows are associated with a decline in GDP per capita, which may result from factors such as profit repatriation, weak linkages between foreign and local firms, or dominance of extractive industries with limited value-added contributions to the broader economy.

Turning to institutional quality, political rights (LNPR) show mixed effects. The current value (D(LNPR)) is significantly positive (0.556, $p < 0.01$), but given the descending data order, this implies that improvements in political rights reduce economic growth in the short run—possibly due to temporary instability or adjustment costs from democratization efforts. The second lag of LNPR is also positive and significant (0.285, $p < 0.01$), reinforcing the interpretation that progress in political freedoms may continue to weigh down growth in the near term. In contrast, civil liberties (LNCL) exhibit a delayed but growth-enhancing effect: while the current value is insignificant, the first, second, and third lags are all negative and significant (especially -1.26 and -1.47), indicating that after initial disruptions, improved civil liberties support economic growth, likely by fostering institutional trust and accountability.

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Table 6.
ARDL Error Correction Regression.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDPP(-1))	-0.11462	0.072673	-1.57727	0.1658
D(LNGDPP(-2))	0.59201	0.058755	10.07595	0.0001
D(LNGDPP(-3))	0.281692	0.070287	4.007766	0.0071
D(LNPR)	0.556326	0.082545	6.739705	0.0005
D(LNPR(-1))	-0.03414	0.098909	-0.34516	0.7418
D(LNPR(-2))	0.285852	0.068461	4.175427	0.0058
D(LNCL)	0.099827	0.097076	1.028336	0.3435
D(LNCL(-1))	-0.49246	0.202921	-2.42687	0.0514
D(LNCL(-2))	-1.26432	0.157416	-8.03174	0.0002
D(LNCL(-3))	-1.47323	0.271641	-5.42343	0.0016
D(LNFDI)	-0.13211	0.018053	-7.31819	0.0003
D(LNFDI(-1))	-0.56482	0.068047	-8.30047	0.0002
D(LNFDI(-2))	-0.39487	0.069459	-5.68494	0.0013
D(LNFDI(-3))	-0.19664	0.037774	-5.20565	0.002
D(LNLBF)	-128.14	25.61882	-5.00178	0.0024
D(LNLBF(-1))	106.0175	39.72282	2.668931	0.0371
D(LNLBF(-2))	-178.024	37.79723	-4.70999	0.0033
D(LNLBF(-3))	50.99409	12.83015	3.974552	0.0073
D(LNFDD)	0.337149	0.122291	2.756931	0.033
D(LNFDD(-1))	-0.59976	0.079376	-7.55593	0.0003
D(LNFDD(-2))	-0.63943	0.07299	-8.76052	0.0001
D(LNFDD(-3))	-0.19341	0.067627	-2.85999	0.0288
CointEq(-1)*	-1.25647	0.138164	-9.09402	0.0001
Case 2: Restricted Constant and No Trend				

The long-run results in Table 7 reveal that foreign direct investment (LNFDI) has a positive and statistically significant coefficient (0.306, p = 0.0167), but considering the descending data order, this implies that increased FDI is associated with a reduction in economic growth. This finding suggests that, over time, the type or management of FDI in Nigeria may not effectively contribute to sustained development, possibly due to profit repatriation or weak integration with the domestic economy. Political rights (LNPR) also show a positive coefficient (0.593) but are statistically insignificant (p = 0.1799), indicating that improvements in political freedoms may not have a measurable long-term effect on growth. However, civil liberties (LNCL) have a strong positive and statistically significant coefficient (1.505, p = 0.0367), interpreted under descending data logic, suggesting that enhanced civil liberties reduce long-term economic growth, potentially due to short-term structural disruptions or reform costs.

Table 7.
Long run result.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNPR	0.593421	0.390987	1.51775	0.1799
LNCL	1.505007	0.562095	2.677496	0.0367
LNFDI	0.306323	0.093214	3.286238	0.0167
LNLBF	0.757956	0.60863	1.245349	0.2594
LNFDD	0.31095	0.537761	0.57823	0.5841
C	-13.7264	10.66112	-1.28752	0.2453
Case 2: Restricted Constant and No Trend				

The ARDL regression results on the interaction between FDI and institutional quality—measured via political rights (LNPR) and civil liberties (LNCL)—show that institutional context significantly moderates the effect of FDI on Nigeria's economic growth. The interaction term D(LNPR*FDI) is positive and statistically significant (0.666674, p = 0.0021), suggesting that political rights enhance the growth impact of FDI in the short run. However, its lagged terms reveal mixed effects: a negative

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coefficient in the first lag (-0.90556) followed by a positive second lag (0.587992) and another strongly negative third lag (-0.40297), indicating an oscillating impact over time, likely due to political adjustments and reform cycles. Conversely, the interaction term D(LNCL*FDI) is negative and highly significant (-0.80925, p = 0.0006), implying that, initially, civil liberties may reduce the effectiveness of FDI on growth. This negative relationship continues at the second lag (-1.0318, p = 0.0003), though the first lag briefly turns positive, albeit marginally significant. These results suggest that while FDI can support growth, its effectiveness depends critically on the nature and maturity of political institutions, with political rights offering more consistent support for FDI-led growth than civil liberties in Nigeria's context.

The long-run results in Appendix 2 reveal that the interaction between political rights and FDI (LNPRFDI) has a positive and statistically significant effect on economic growth (coefficient = 1.231489, p = 0.0394), indicating that political rights enhance the long-term growth impact of FDI in Nigeria. This suggests that when political institutions are more inclusive and stable, FDI becomes more productive and better integrated into the domestic economy. Conversely, the interaction between civil liberties and FDI (LNCLFDI) is negative but not statistically significant (coefficient = -0.63736, p = 0.2334), implying that while civil liberties might slightly dampen the long-run effect of FDI on growth, the relationship is not strong enough to draw firm conclusions. Overall, the findings reinforce the idea that the institutional environment—particularly political rights—is crucial in shaping how effectively FDI contributes to sustainable economic growth.

5.4. Diagnostic Test

Table 8 presents the diagnostic tests for both the main ARDL model and the interaction model involving institutional quality and FDI (INSTFDI), confirming the robustness and reliability of both estimations. The R-squared values are high (0.9865 for the main model and 0.9933 for the INSTFDI model), indicating that the independent variables explain a large proportion of the variation in economic growth. The Adjusted R-squared values (0.9667 and 0.9787) further validate the models' explanatory power, accounting for degrees of freedom. The Durbin-Watson statistics of 2.3931 and 2.1901 are close to the ideal value of 2, suggesting the absence of serial autocorrelation in both models' residuals.

Regarding residual diagnostics, the Breusch-Godfrey Serial Correlation LM Test returns p-values of 0.1124 and 0.1448, indicating no serial correlation. At the same time, the Breusch-Pagan-Godfrey heteroscedasticity test yields p-values of 0.4996 and 0.4231, confirming homoscedasticity. Moreover, both models' CUSUM and CUSUM of Squares plots lie within the 5% significance bounds, confirming the parameter stability of the short-run and long-run estimates over the sample period (See Figures 3 & 4). Collectively, these diagnostic tests affirm that the models are statistically valid, stable, and free from major econometric issues, strengthening the credibility of the findings and their policy implications.

Table 8.
Diagnostic Test.

Diagnostic Tests	**Main**	**INST*FDI**
R-Square	0.9865	0.9933
Adjusted R-square	0.9667	0.9787
Durbin-Watson statistics	2.3931	2.1901
Serial Correlation	11.991(0.1124)	21.323 (0.1448)
Heteroscedasticity Test	1.0744 (0.4996)	1.3634 (0.4231)

Note: Numbers in parentheses are probabilities, Jarque Bera Normality Test was utilised, Serial correlation is with Breusch-Godfrey serial correlation Lagrange Statistics, Heteroscedasticity test is with Breusch-Pagan-Godfrey test.
Source: Output of E-views 10 version.

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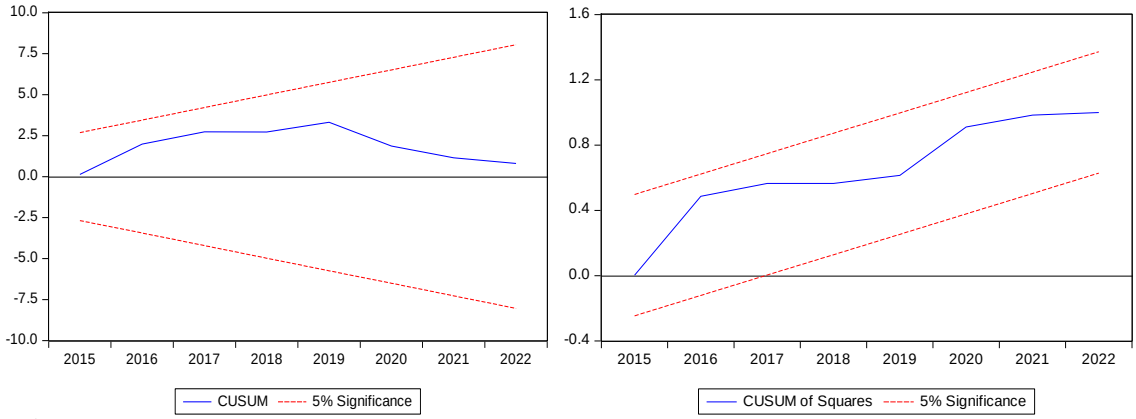

Figure 3.
CUSUM and CUSUM of Square for the Main Model.

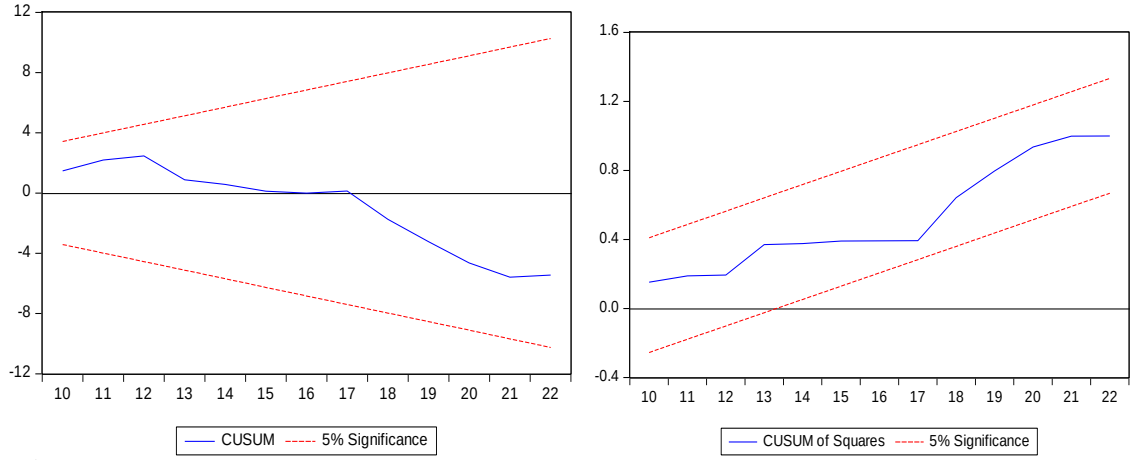

Figure 4.
CUSUM and CUSUM of Square for Interaction Model.

5.5. Discussion of Findings

The ARDL Error Correction Regression results align closely with empirical literature that emphasizes the conditional impact of FDI on economic growth, especially in countries with weak institutional frameworks. Adegboye, et al. [3] and Jude and Levieuge [4] noted that the effectiveness of FDI in Sub-Saharan Africa, including Nigeria, is significantly undermined by poor institutional quality. The short-run negative effect of FDI on GDP per capita in this study supports these findings, suggesting that while FDI flows into Nigeria, it may not contribute meaningfully to broad-based economic development due to issues such as weak domestic linkages, sectoral concentration in extractive industries, or capital flight through profit repatriation. These findings are consistent with Hayat [5] and Fagbemi and Bello [16] who observed that in low and middle-income countries, FDI alone does not stimulate growth unless supported by sound governance structures.

The findings related to political rights and civil liberties further affirm the nuanced role of institutional quality in growth outcomes. In the short run, the destabilizing impact of democratization processes—such as legal reforms and expanded political participation—can temporarily dampen economic performance, echoing the transitional pains observed in Onuigbo [17] and Okoh [8]. However, the long-run interaction between FDI and political rights being positive and significant aligns with Miao, et al. [9] and Wang, et al. [7] who emphasized that democratic institutions enhance the absorptive capacity of host nations, thereby enabling more productive use of foreign capital. Conversely,

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the negative short-run and statistically insignificant long-run effect of civil liberties when interacting with FDI points to the complexity of reform processes. As highlighted by Ullah, et al. [15] institutional dimensions such as regulatory quality and civil liberties often have a less pronounced impact unless political stability and anti-corruption measures are reinforced.

In this context, the policy implications are clear: Nigeria must improve the quality of its institutions—particularly political rights—to unlock the growth potential of FDI. While civil liberties are essential for long-term societal development, their economic benefits may take longer to materialize and should be nurtured alongside institutional reforms that ensure policy coherence and investor confidence. These findings echo the recommendations of Yeboua [19] and Aluko, et al. [18] who argue that economic freedom and democratic stability are preconditions for capitalizing on FDI-led growth. Ultimately, this study contributes to the literature by empirically validating that FDI does not automatically translate into economic gains; instead, the institutional environment determines its transformative potential.

The empirical results of this study strongly align with the foundational theories underpinning the analysis—Endogenous Growth Theory, Institutional Economics, and Absorptive Capacity Theory. Unless moderated by strong institutional quality, the short-run and long-run findings that FDI negatively affects economic growth in Nigeria support the argument from Institutional Economics that institutions shape the effectiveness of market interactions and capital utilization [3, 11]. The significant and positive interaction between political rights and FDI confirms the Absorptive Capacity Theory [12] which posits that the ability of a country to benefit from external inputs like FDI depends on its institutional and governance frameworks. This also reflects the practical application of Endogenous Growth Theory, where foreign capital can only foster growth when supported by domestic factors such as human capital, regulatory efficiency, and financial development [10, 14]. Therefore, the study validates that FDI alone does not guarantee growth; its benefits are contingent upon the quality of the domestic institutional environment and the economy's absorptive capacity.

6. Conclusion

The findings of this study reveal that while Foreign Direct Investment (FDI) is often promoted as a catalyst for economic growth, its effectiveness in Nigeria is largely conditional upon the quality of political and institutional frameworks. In both the short- and long-run analyses, FDI on its own had a statistically significant negative impact on economic growth, suggesting that without the support of strong institutions, foreign capital may fail to deliver its intended developmental benefits. The interaction analysis further showed that political rights enhance the impact of FDI, while civil liberties, although important, appear to have a more complex and less consistent moderating effect. These results underscore the importance of institutional quality in transforming foreign investment into tangible economic development and align with the theoretical underpinnings of Institutional Economics and Absorptive Capacity Theory.

Based on these outcomes, the study recommends that policymakers in Nigeria prioritize institutional reforms that strengthen political rights and governance structures. Reforms should focus on promoting rule of law, transparency, and accountability to foster a conducive environment where FDI can contribute meaningfully to long-term economic growth. In particular, investment policies should encourage strategic sectors that integrate local content, promote technology transfer, and limit excessive capital outflows. Furthermore, enhancing political freedoms and civil liberties must go hand in hand with maintaining macroeconomic stability to reduce short-term disruptions while maximizing long-term gains. Strengthening domestic absorptive capacity through education, infrastructure, and financial sector development will also be essential to unlock the full benefits of FDI.

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Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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Appendix

Appendix 1.
ARDL Error Correction Regression on Institution on Impact of FDI on Economic Growth in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDPP(-1))	0.539492	0.108141	4.988767	0.0005
D(LNGDPP(-2))	-0.11406	0.092342	-1.23521	0.245
D(LNGDPP(-3))	-0.4382	0.103069	-4.25149	0.0017
D(LNLBF)	221.2002	41.28783	5.357515	0.0003
D(LNLBF(-1))	-127.89	48.61414	-2.63071	0.0251
D(LNLBF(-2))	43.48339	43.37361	1.002531	0.3397
D(LNLBF(-3))	-180.665	28.52734	-6.33306	0.0001
D(LNFDD)	-0.48141	0.202071	-2.38238	0.0385
D(LNFDD(-1))	1.749643	0.241216	7.253444	0.0000
D(LNFDD(-2))	1.25046	0.201247	6.213563	0.0001
D(LNFDD(-3))	1.03387	0.157416	6.567752	0.0001
D(LNPR*FDI)	0.666674	0.162174	4.110864	0.0021
D(LNPR*FDI(-1))	-0.90556	0.165339	-5.47699	0.0003
D(LNPR*FDI(-2))	0.587992	0.161149	3.648737	0.0045
D(LNPR*FDI(-3))	-0.40297	0.05546	-7.26593	0.0000
D(LNCL*FDI)	-0.80925	0.162709	-4.97358	0.0006
D(LNCL*FDI(-1))	0.399374	0.18681	2.137862	0.0582
D(LNCL*FDI(-2))	-1.0318	0.19005	-5.4291	0.0003
CointEq(-1)*	-0.99439	0.108368	-9.17603	0.0000
Case 2: Restricted Constant and No Trend				

Appendix 2.
Long Run Results on Institution on Impact of FDI on Economic Growth in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNPRM	0.285492	0.126713	2.253067	0.0479
LNLBF	1.544036	1.274795	1.211204	0.2537
LNFDD	-3.62978	1.2396	-2.92818	0.0151
LNPRFDI	1.231489	0.519886	2.368767	0.0394
LNCLFDI	-0.63736	0.502514	-1.26834	0.2334
C	-30.9624	20.5128	-1.50942	0.1621
Case 2: Restricted Constant and No Trend				

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