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THE IMPACT OF FOREIGN DIRECT INVESTMENT (FDI) ON ECONOMIC GROWTH IN NIGERIA

BY

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UNIVERSITY OF BENIN
BENIN CITY

NOVEMBER, 2025

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A PROJECT WRITTEN AND SUBMITTED IN THE DEPARTMENT OF ECONOMICS, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF SCIENCE (B.SC.) DECREE IN ECONOMICS

NOVEMBER, 2025

CERTIFICATION

This is to certify that this project was carried out by Perpetua Eghonghon OSUMAH with matriculation number SSC2105612 in the Department of Economics, University of Benin, Benin City and approved as adequate in scope and quality for the partial fulfilment of the requirements of the award of Bachelor of Science (B Sc.) Degree in Economics.

Mr Sowemimo Eseosa **(Project Supervisor)**	**Date**
Prof. S. O. Igbinedion **(Project Coordinator)**	**Date**
Prof. C. A. Ighodaro **(Head of Department)**	**Date**

DEDICATION

Firstly, I dedicate this project work to God Almighty, the source of my strength, wisdom, and inspiration. His unfailing grace, love, and guidance have seen me through every challenge and made this work a reality.

I also dedicate it to myself, for believing, persevering, and staying committed even when the journey seemed tough. To my wonderful parents, whose endless love, sacrifices, and prayers have been my greatest support, your encouragement has shaped me into who I am today.

To my lovely siblings, Osumah Valentine, Osumah Noel, Osumah Luke, and Osumah Michael, thank you for your constant love, laughter, and motivation that keep me going.

Lastly, I dedicate this work to every researcher striving to make a positive change in the economic sector, may your efforts continue to inspire transformation and progress.

ACKNOWLEDGEMENTS

First and foremost, I express my profound gratitude to Almighty God for His unending grace, wisdom, and strength throughout the course of this project. My heartfelt appreciation goes to the Head of Department, Prof. C. A. Ighodaro, for providing a conducive academic environment and for the guidance rendered during my study. I am deeply thankful to my project supervisor, Dr. (Mrs.) Sowemimo Eseosa, for her invaluable support, patience, and constructive feedback, which were instrumental to the success of this research.

I also say a special thank you to my staff adviser, Dr. John Izevbigie, and to all the teaching and non-teaching staff of the Department of Economics, Faculty of Social Sciences, University of Benin, who have influenced me positively throughout the course of this programme. Thank you.

I owe special thanks to my beloved parents, Mr. and Mrs. Raymond Osumah, for their unwavering love, prayers, sponsorship, and encouragement and for being the backbone of all my achievements. Their sacrifices and guidance have been my greatest motivation. I also appreciate my siblings (Valentine, Eseose, Luke, and Michael) for their unending encouragement, and my extended family members (Mr. and Mrs. Udiafi Gabriel, Aunty Rukky, Uncle Sam, Agnes Obeche, and Christian Edward-Ngwu) for their continuous support and belief in me.

A special thank you to Dr. Chris Ekiyor for the support, for believing in me, and for making deliberate efforts to bring out the best in me. Thank you, Sir.

To my connects who became friends and mentors (JCI Amb. Elochukwu U., David Ochiejina, and Adeolu Adebambo, Omonigbo Abigail), I am sincerely grateful for your counsel, mentorship, and encouragement throughout my academic journey. My appreciation also extends to my senior colleagues (Omotayo Omatunde and Osadu Pedro), whose advice and support have been invaluable.

To my friends turned sisters (Jessica, Isioma, Theodora, Annette, and Tovia), whom the University of Benin has blessed me with, thank you for the laughter, understanding, and companionship that made this journey worthwhile. I also want to say a big thank you to friends this journey blessed me with (Romi, Oshafi, and Martins), and friends who've been with me from way back (Towolawi Habibat and Ebiama Faith), for always being there for me through every step of this process.

Worth mentioning is Sir Aminu Joseph Momodu, thank you, Sir, for your love and support.

I also want to take this opportunity to thank the personalities and organizations I referenced in my work, as well as the online data platforms that made it possible to complete this research successfully. To my Course Rep, Afemikhe Godwin, thank you for always keeping me informed, active, and up and doing. To my fellow project students, coursemates, and junior colleagues, thank you so much for the love.

33 To everyone who contributed in one way or another to the success of this work, I say a heartfelt thank you.

And finally, to myself, thank you for showing resilience even when things got tough, for choosing growth over comfort, and for believing that you could achieve this. You have come a long way, and I am proud of how far you have pushed through every challenge to reach this point.

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ABSTRACT

This study investigates the impact of foreign direct investment (FDI) on economic growth in Nigeria from 1981 to 2023, employing the Autoregressive Distributed Lag (ARDL) modeling approach. The study incorporates GDP growth rate as the dependent variable and FDI, interest rate, exchange rate, and inflation rate as explanatory variables. Descriptive statistics reveal moderate variability among the variables, while correlation analysis indicates a positive association between GDP growth and FDI, and a negative relationship with inflation. Unit root tests confirm that all variables are stationary at first difference, satisfying the preconditions for ARDL estimation. The ARDL bounds test results establish the existence of a long-run equilibrium relationship among the variables. Short-run dynamics show that FDI has both positive and negative effects on GDP growth across lags, suggesting that the impact of investment inflows is time-dependent. Exchange rate depreciation exerts a significant negative influence on economic growth, while inflation exhibits mixed effects depending on lag structure. The long-run estimates reveal that FDI, interest rate, exchange rate, and inflation have negative but statistically insignificant impacts on GDP growth, implying limited long-term contribution to growth within the study period. Diagnostic tests confirm the absence of heteroskedasticity and autocorrelation, validating the robustness of the model. The study concludes that FDI, though influential in the short run, does not significantly drive long-term growth unless supported by stable macroeconomic conditions. It recommends that policymakers enhance the investment climate, ensure exchange rate stability, and implement consistent macroeconomic policies to attract productive FDI and sustain economic growth in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Foreign Direct Investment (FDI) is a critical driver of economic development in emerging economies such as Nigeria. It involves cross-border investments in which foreign entities acquire a lasting interest in domestic enterprises, facilitating the transfer of capital, technology, and managerial expertise. For Nigeria, FDI serves as a crucial mechanism to bridge the investment gap, stimulate industrialization, and enhance global competitiveness (UNCTAD, 2023). Over the years, Nigeria has attracted FDI across various sectors, including oil and gas, telecommunications, and manufacturing. However, the volume and effectiveness of these investments have been inconsistent due to factors such as macroeconomic instability, policy uncertainties, and inadequate infrastructure (Central Bank of Nigeria, 2023). In 2023, Nigeria's FDI inflows dropped to approximately $1.87 billion, a sharp decline from $4.8 billion in 2022, highlighting challenges in maintaining consistent investment levels (Lloyds Bank Trade, 2023).

Macroeconomic indicators further illustrate the difficulties facing foreign investors. Nigeria's GDP growth slowed to 2.74% in 2023, down from 3.25% in 2022, while inflation surged to 28.92% in the same year, eroding investor confidence and increasing operational costs (National Bureau of Statistics, 2023). The Nigerian naira also depreciated significantly, averaging 633.83 NGN to 1 USD in 2023, further

complicating returns for foreign investors (Exchange-Rates.org, 2023). Despite these challenges, Nigeria remains an important destination for FDI in Africa due to its large market, abundant natural resources, and strategic location. Yet, structural issues, such as an annual infrastructure financing gap estimated at $100 billion and inadequate access to electricity for over 40% of the population, continue to limit FDI's impact on economic growth (African Development Bank, 2023). Comparatively, countries like Egypt and South Africa attracted $11.4 billion and $9.1 billion in FDI in 2022, respectively, showing that Nigeria still lags behind its regional peers (UNCTAD, 2023).

Historically, FDI in Nigeria was viewed with skepticism, perceived as potentially crowding out domestic investment. However, the modern perspective recognizes FDI as a key contributor to economic growth by providing capital, fostering competition, and enhancing productivity through technology and skill transfer (African Development Bank, 2022). Research suggests a bidirectional relationship, where FDI stimulates economic growth and economic growth, in turn, attracts further FDI, particularly when supported by factors like human capital, trade openness, and quality infrastructure (AfDB, 2022). This study, therefore, seeks to examine the relationship between FDI and Nigeria's economic growth, focusing on the determinants that influence investment flows and their effects on the economy from 2010 to 2023. By analyzing economic, political, and institutional variables, the

research aims to provide insights that can inform policies to improve Nigeria's investment climate and promote sustainable growth.

1.2 Statement of the Problem

Foreign Direct Investment (FDI) is widely recognized as a vital catalyst for economic growth, providing capital, advanced technology, and managerial expertise while promoting employment and human capital development. In Nigeria, successive governments have implemented policies to attract FDI, including tax incentives, credit facilities, and infrastructural development programs. Despite these efforts, the country continues to face significant challenges in leveraging FDI to achieve sustained economic growth. Nigeria's FDI inflows have been highly volatile over recent years. In 2023, inflows declined sharply to approximately $1.87 billion, down from $4.8 billion in 2022 (Lloyds Bank Trade, 2023), highlighting the country's inconsistent performance in attracting foreign investors. Factors such as macroeconomic instability, including inflation that surged to 28.92% in 2023 (National Bureau of Statistics, 2023) and currency depreciation (with the naira averaging 633.83 NGN to 1 USD in 2023) (Exchange-Rates.org, 2023), have further discouraged investment.

Beyond economic instability, structural and institutional challenges continue to limit FDI's effectiveness in promoting growth. Political uncertainties, policy inconsistencies, bureaucratic bottlenecks, corruption, and regional security issues contribute to an unpredictable investment climate. Nigeria ranked 154th out of 180 countries on the Corruption Perception Index in 2022 (Transparency International,

2022) and 131st out of 190 in the World Bank's Ease of Doing Business ranking (World Bank, 2022).

Infrastructure deficits remain a major barrier. Nigeria faces an estimated $100 billion annual infrastructure financing gap, particularly in transportation, energy, and telecommunications, while over 40% of the population lacks access to reliable electricity (African Development Bank, 2023). These constraints increase operational costs and reduce the country's competitiveness compared to regional peers such as Egypt and South Africa, which attracted $11.4 billion and $9.1 billion in FDI in 2022, respectively (UNCTAD, 2023). Given these challenges, Nigeria has not fully harnessed the potential of FDI to accelerate economic growth. The country's fluctuating FDI levels, coupled with macroeconomic, institutional, and infrastructural constraints, raise critical questions about the determinants of FDI and its true impact on economic development.

1.3 Objectives of the Study

The broad objective of this study is to examine the impact of Foreign Direct Investment (FDI) on Nigeria economic growth. The specific objectives include:

1. examine the impact of Foreign Direct Investment on economic growth of Nigeria.
2. To investigate the influence of inflation on economic growth in Nigeria.
3. To evaluate the role of exchange rate fluctuations on Nigeria's economic growth.

1.4 Research Questions

To guide this study and achieve the stated objectives, the following research questions are posed: The study seeks to understand the dynamics between Foreign Direct Investment (FDI) and economic growth in Nigeria, particularly how macroeconomic variables and labor supply influence this relationship. Specifically, the study addresses the following questions:

1 What is the impact of Foreign Direct Investment on Nigeria's economic growth?

2 How does inflation economic growth in Nigeria?

3 What role do exchange rate fluctuations play on Nigeria's economic growth?

1.5 Research Hypotheses

Based on the research questions, the following null hypotheses are formulated for empirical testing:

$H0_1$: Foreign Direct Investment has no significant impact on Nigeria's economic growth.

$H0_2$: Inflation does not significantly influence economic growth in Nigeria.

$H0_3$: Exchange rate fluctuations do not significantly affect Nigeria's economic growth.

1.6 Significance of the Study

This study is significant as it provides valuable insights into the impact of Foreign Direct Investment (FDI) on Nigeria's economic growth. The findings will assist policymakers in developing evidence-based strategies to attract and sustain foreign investment, which is crucial for fostering economic development.

Understanding how macroeconomic factors such as inflation and exchange rate fluctuations, as well as labor supply, influence the effectiveness of FDI will enhance economic planning and guide strategic interventions. Additionally, the study will offer potential foreign investors information about the opportunities and risks in the Nigerian economy, supporting informed investment decisions. Academically, the research contributes to existing literature on FDI and economic growth in developing countries, particularly Nigeria, and can serve as a reference for future studies. Furthermore, by identifying factors that enhance or impede the impact of FDI, the study may indirectly contribute to employment creation, technology transfer, and overall improvement in the standard of living.

1.7 Scope of the Study

This study focuses on Nigeria and examines both the theoretical and empirical dimensions of Foreign Direct Investment and its impact on economic growth. The research covers the period from 2010 to 2023, providing a comprehensive analysis of recent economic developments and policy interventions. The study investigates the effects of FDI on Nigeria's economic growth while considering the influence of macroeconomic variables such as inflation and exchange rate fluctuations, as well as the moderating role of the total labor force. Methodologically, the study adopts quantitative approaches, including regression analysis and ARDL techniques, to empirically assess the relationships between the variables. By narrowing the scope to

national-level data and specific macroeconomic indicators, the study ensures a focused and contextually relevant analysis of FDI's role in Nigeria's economy.

1.8 Structure of the Study

This study is structured to provide a comprehensive understanding of the impact of Foreign Direct Investment (FDI) on Nigeria's economic growth. The research is organized into five chapters. Chapter One introduces the study by presenting the background, statement of the problem, objectives, research questions, hypotheses, significance, scope, and structure of the study. Chapter Two provides a detailed review of related literature, covering theoretical and empirical studies on FDI, economic growth, and the role of macroeconomic variables such as inflation, exchange rates, and labor force. Chapter Three outlines the research methodology, including the research design, data sources, variable definitions, model specification, and techniques for data analysis. Chapter Four presents the results of the empirical analysis, discusses the findings in relation to the research objectives, and interprets the implications of the results. Finally, Chapter Five concludes the study, summarizes key findings, draws policy implications, and offers recommendations for stakeholders and future research. This structured approach ensures a logical flow of ideas and provides clarity in addressing the research problem.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Clarification

2.1.1 Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) represents long-term investments made by individuals or corporations from one country into business ventures located in another country. Such investments typically involve exerting significant control or influence over the foreign enterprise. Generally, FDI is characterized by ownership of at least 10% of the voting shares of a foreign company, signifying a substantial degree of interest. Forms of FDI include Greenfield investments, which involve establishing new operations; mergers and acquisitions, where foreign firms purchase existing businesses; and joint ventures, which allow international firms to collaborate with domestic entities by sharing resources and risks (OECD, 2008).

2.1.2 Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is a central economic measure that calculates the total monetary value of all goods and services produced within a nation's borders over a specific time, either quarterly or annually. It reflects the overall size and performance of an economy and is widely used to evaluate economic progress and policy effectiveness. GDP can be computed using three major approaches: the production approach, which aggregates the value added across sectors; the income approach, which sums up income earned by production factors; and the expenditure

approach, which calculates the total spending on goods and services (World Bank, 2020).

2.1.3 Inflation Rate (INF)

The inflation rate is the rate at which the general price level of goods and services increases over a period, typically expressed as a yearly percentage. It indicates the decline in purchasing power of a currency, with implications for households, businesses, and government policy. Inflation is measured using indices such as the Consumer Price Index (CPI), which tracks changes in household goods and services, and the Producer Price Index (PPI), which measures changes in input prices (IMF, 2019).

2.1.4 Exchange Rate (EXR)

The exchange rate denotes the value of one currency in terms of another, serving as a vital determinant of trade, investment, and monetary policy. It reflects a country's external competitiveness and economic stability. Exchange rate regimes are generally classified as fixed, where a currency is pegged to another or to a basket of currencies, or floating, where its value fluctuates based on demand and supply in the global foreign exchange market (Obstfeld & Rogoff, 1996).

2.1.5 Interest Rate (INT)

The interest rate is the cost of borrowing money or the return earned on savings and investments, usually expressed as a percentage of the principal amount. It represents the price paid by borrowers to lenders for the use of money over a given

period of time. In simple terms, if you take a loan from a bank, the interest rate determines how much extra you will repay in addition to the amount borrowed. On the other hand, if you save or invest money in a financial institution, the interest rate tells you how much you will earn on those savings or investments.

In the context of an economy, interest rates are often set or influenced by the central bank (such as the Central Bank of Nigeria) to regulate money supply, control inflation, encourage investment, and maintain overall economic stability. High interest rates tend to discourage borrowing and investment but encourage saving, while low interest rates stimulate borrowing, business expansion, and economic growth.

2.2 Foreign Direct Investment and the Nigerian Economy

Foreign Direct Investment (FDI) refers to cross-border investments in which a foreign entity acquires a lasting interest in a domestic enterprise, typically to gain significant control over operations (UNCTAD, 2023). FDI serves as a channel for capital inflows, technology transfer, job creation, and human capital development, all of which can stimulate economic growth. In Nigeria, FDI has been particularly prominent in sectors such as oil and gas, telecommunications, and manufacturing (Central Bank of Nigeria, 2023). Despite the potential benefits, the Nigerian economy has faced challenges in fully harnessing FDI due to policy inconsistencies, infrastructure deficits, and macroeconomic volatility (World Bank, 2022). The patterns of FDI inflows into Nigeria have exhibited significant fluctuations over time. Historical trends indicate that inflows are largely concentrated in extractive industries

and telecommunications, while manufacturing and agriculture attract relatively lower investment (NIPC, 2023). These variations are influenced by factors such as global capital mobility, domestic policy incentives, exchange rate stability, and the ease of doing business in the country (AfDB, 2022). Monitoring such patterns is crucial to understanding the dynamics of FDI and its implications for sustainable economic growth.

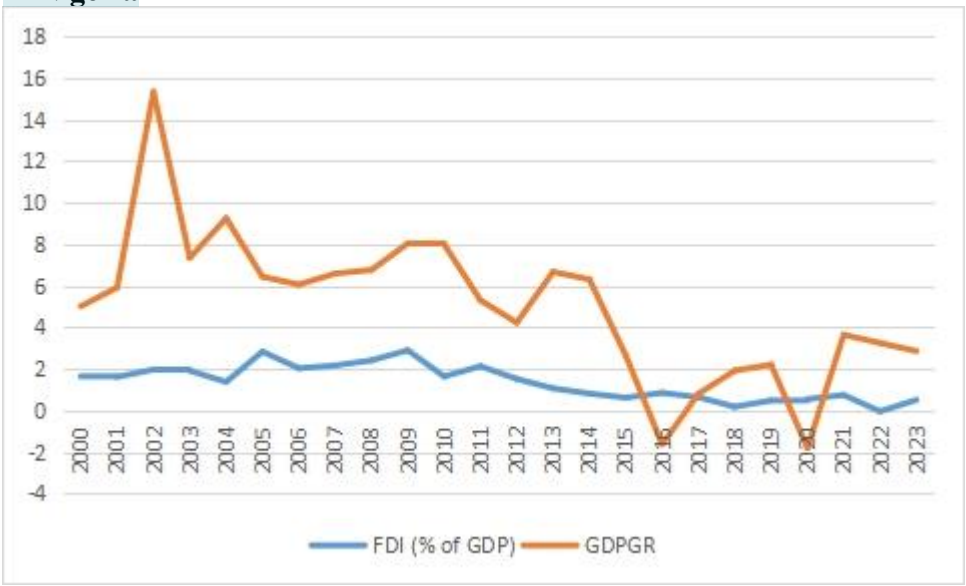
The relationship between FDI and economic growth is generally viewed as positive, as foreign investments bring capital, advanced technology, and managerial expertise into the host economy (Romer, 1990; Dunning, 1980). In Nigeria, empirical evidence suggests that FDI contributes to GDP growth by enhancing productivity and generating employment, though the magnitude of the effect varies across sectors and time periods (CBN, 2023). The effectiveness of FDI in promoting growth is also mediated by macroeconomic factors, such as inflation, exchange rate stability, and the availability of skilled labor. This interrelationship underscores the importance of assessing not only the direct impact of FDI but also the contextual factors that influence its growth effects.

Table 1: Trend Analysis of Foreign Direct Investment and Gross Domestic Product

YEAR	FDI (% of GDP)	GDPGR
2000	1.64832099	5.015934759
2001	1.618615558	5.917684649
2002	1.971584135	15.32915574
2003	1.91462057	7.347194968
2004	1.380373875	9.250558229
2005	2.836294054	6.438516525
2006	2.035752673	6.059428032
2007	2.16919537	6.591130361
2008	2.413739183	6.764472778
2009	2.900248732	8.036925101
2010	1.642073692	8.005655916
2011	2.133117702	5.307924203
2012	1.523782338	4.230061175
2013	1.069539365	6.671335393
2014	0.817478468	6.309718655
2015	0.621501637	2.652693295
2016	0.853395743	-1.616868949
2017	0.642182922	0.805886619
2018	0.183821496	1.922757342
2019	0.485777628	2.208429277
2020	0.551893509	-1.794253083
2021	0.751578312	3.647186541
2022	-0.039126749	3.251681408
2023	0.514645981	2.860214991

Source: World Bank Data (2023).

Fig 1: Trend Analysis of Foreign Direct Investment and Gross Domestic Product in Nigeria



Source: Author's Computation.

The trend in Foreign Direct Investment (FDI) as a percentage of GDP and Nigeria's GDP growth rate between 2000 and 2023 reveals a fluctuating and somewhat weak relationship. In the early 2000s, FDI as a share of GDP was relatively strong, averaging above 1.5 percent, with GDP growth recording impressive figures such as 15.3 percent in 2002 and 9.2 percent in 2004. However, this high growth was not consistently tied to FDI inflows, as some years of higher FDI percentages corresponded with modest growth, while years of lower inflows still recorded significant GDP expansion. Between 2005 and 2010, FDI inflows increased, reaching 2.9 percent of GDP in 2009, while GDP growth also remained robust, averaging above 6 percent. This suggests that during this period, foreign investments may have supported growth momentum, although other factors such as oil revenues and

government spending also played important roles. From 2011 to 2014, both FDI and growth began to decline gradually, with FDI falling from 2.1 percent to just 0.8 percent of GDP, and GDP growth slowing from 5.3 percent in 2011 to 6.3 percent in 2014.

A more significant decline occurred between 2015 and 2020. FDI inflows dropped below 1 percent of GDP, reaching as low as 0.18 percent in 2018, while GDP growth also weakened, falling to 2.6 percent in 2015 and contracting by 1.6 percent in 2016 during the recession. By 2020, the economy contracted again by 1.7 percent, while FDI remained low at 0.55 percent of GDP. This period reflects Nigeria's macroeconomic instability, oil price shocks, and structural challenges that limited both growth and investment attraction. From 2021 to 2023, FDI remained subdued, fluctuating below 1 percent of GDP, even dipping to negative inflows in 2022 at -0.04 percent. GDP growth, however, showed modest recovery, recording 3.6 percent in 2021, 3.2 percent in 2022, and 2.9 percent in 2023. This suggests that growth in recent years has been driven more by domestic factors and policy adjustments rather than significant foreign capital inflows.

Overall, the table indicates that while FDI can contribute to growth, Nigeria's economic performance has not been strongly or consistently tied to foreign investment inflows. Growth appears to be influenced by broader structural and macroeconomic conditions such as oil prices, policy reforms, and domestic demand, with FDI playing a supplementary rather than a dominant role.

2.2.1 Foreign Direct Investment and Inflation Rate in Nigeria

The relationship between FDI and inflation is two-sided. On one hand, inflows of FDI can expand domestic production and reduce inflationary pressures by improving supply (Otu, Adejumo, & Akinlo, 2020). On the other hand, persistently high inflation in Nigeria erodes investor confidence and discourages long-term capital inflows (Adetunji & Olayemi, 2022). This suggests that while FDI may help to lower inflation, stable price levels are a prerequisite for sustaining foreign investment (Teriba, 2024).

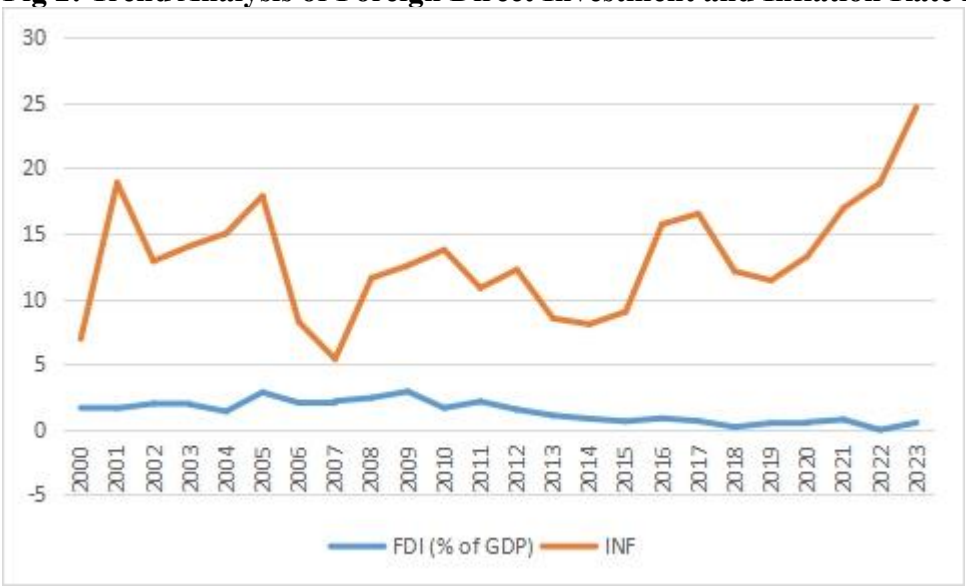
Table 2: Trend Analysis of Foreign Direct Investment and Inflation Rate in Nigeria

YEAR	FDI (% of GDP)	INF
2000	1.64832099	6.933292156
2001	1.618615558	18.87364621
2002	1.971584135	12.8765792
2003	1.91462057	14.03178361
2004	1.380373875	14.99803382
2005	2.836294054	17.86349337
2006	2.035752673	8.22522152
2007	2.16919537	5.388007969
2008	2.413739183	11.58107517
2009	2.900248732	12.53782773
2010	1.642073692	13.74005214
2011	2.133117702	10.82613719
2012	1.523782338	12.2242413
2013	1.069539365	8.495518383
2014	0.817478468	8.04741088
2015	0.621501637	9.00943498
2016	0.853395743	15.69681264
2017	0.642182922	16.50226621
2018	0.183821496	12.09510652

2019	0.485777628	11.39642234
2020	0.551893509	13.24602343
2021	0.751578312	16.95284572
2022	-0.039126749	18.84718778
2023	0.514645981	24.6595502

Source: World Bank Data (2023).

Fig 2: Trend Analysis of Foreign Direct Investment and Inflation Rate in Nigeria



Source: Author's Computation.

The relationship between Foreign Direct Investment (FDI) as a percentage of GDP and inflation in Nigeria from 2000 to 2023 reveals an unstable and inverse tendency. In the early 2000s, FDI inflows remained relatively strong, averaging around 1.6 to 2.0 percent of GDP, while inflation fluctuated widely, peaking at 18.9 percent in 2001 before falling to 12.9 percent in 2002. This indicates that high inflation did not immediately deter inflows, though subsequent moderation in inflation coincided with sustained but slightly declining FDI levels. Between 2005 and 2009, FDI inflows rose, reaching a peak of 2.9 percent of GDP in 2009, while inflation oscillated between 8.2

percent and 17.9 percent. This period suggests that investors were still attracted despite moderate inflationary pressures, possibly due to oil revenue inflows and structural reforms. However, from 2010 onward, a gradual decline in FDI inflows began, even as inflation remained within double digits. For instance, in 2013 FDI fell to 1.07 percent of GDP while inflation dropped to 8.5 percent, showing that lower inflation did not necessarily translate into higher foreign investment.

The years after 2014 reveal a more concerning trend. FDI inflows fell below 1 percent of GDP, dropping to 0.62 percent in 2015, 0.18 percent in 2018, and eventually turning negative in 2022 at -0.04 percent, reflecting net outflows. During the same period, inflation trended upward, rising from 9.0 percent in 2015 to 15.7 percent in 2016, 16.5 percent in 2017, and peaking at 24.7 percent in 2023. This sharp increase in inflation coincided with consistently low or negative FDI inflows, suggesting that macroeconomic instability and rising prices discouraged foreign investors from committing long-term capital to Nigeria.

Overall, the trend shows that while FDI and inflation do not always move in direct opposition, persistent inflationary pressures—especially in the period after 2015—appear to have eroded investor confidence and reduced FDI inflows. The evidence suggests that stable inflation is critical to sustaining foreign capital inflows, as rising inflation increases operational costs, reduces real returns, and deters foreign participation in the Nigerian economy.

2.2.2 Foreign Direct Investment and Exchange Rate in Nigeria

Exchange rate stability is a major determinant of how FDI translates into growth. Stable exchange rates encourage foreign investors by reducing uncertainty about profit repatriation and currency risks (Asiedu, 2002). In contrast, exchange rate volatility in Nigeria undermines FDI inflows and reduces their growth-enhancing effects by raising import costs and discouraging reinvestment (Akinwale & Aremu, 2019). This makes exchange rate management central to the FDI–growth nexus.

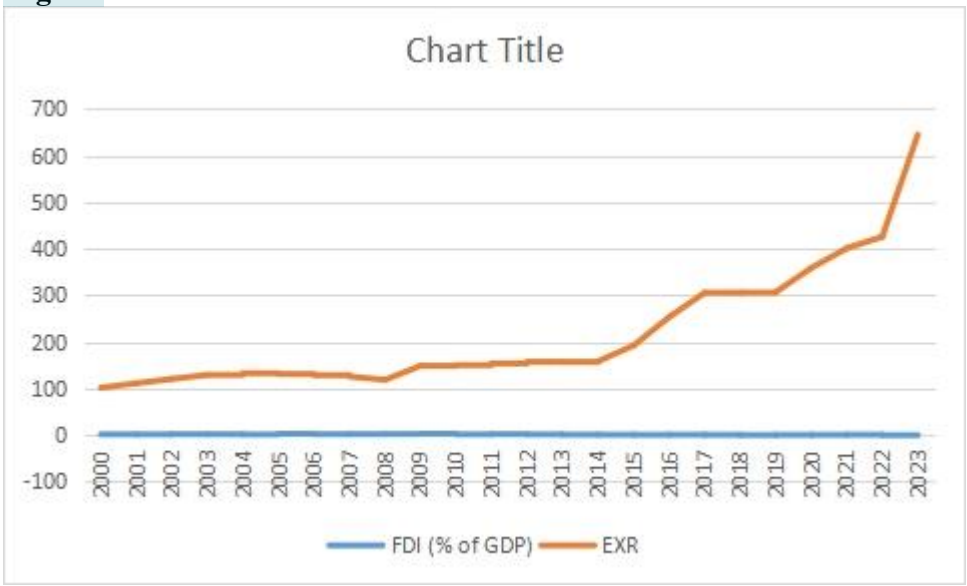
Table 3: Trend Analysis of Foreign Direct Investment and Exchange Rate in Nigeria.

YEAR	FDI (% of GDP)	EXR
2000	1.64832099	101.6973333
2001	1.618615558	111.23125
2002	1.971584135	120.5781583
2003	1.91462057	129.22235
2004	1.380373875	132.888025
2005	2.836294054	131.2743333
2006	2.035752673	128.6516667
2007	2.16919537	125.8081083
2008	2.413739183	118.5666667
2009	2.900248732	148.88
2010	1.642073692	150.2975
2011	2.133117702	153.8625
2012	1.523782338	157.5
2013	1.069539365	157.3116667
2014	0.817478468	158.5526417
2015	0.621501637	192.4403333
2016	0.853395743	253.492
2017	0.642182922	305.7901092
2018	0.183821496	306.0836882
2019	0.485777628	306.9209515
2020	0.551893509	358.8107973
2021	0.751578312	401.1520292

2022	-0.039126749	425.9791581
2023	0.514645981	645.1940679

Source: World Bank Data (2023).

Fig 3: Trend Analysis of Foreign Direct Investment and Exchange Rate in Nigeria.



Source: Author's Computation.

The exchange rate plays a crucial role in shaping the inflow of Foreign Direct Investment (FDI) into Nigeria, as it directly affects the profitability and risk perception of investors. A stable exchange rate environment enhances investor confidence, while persistent depreciation of the naira discourages foreign inflows due to the risks of currency losses (Akinlo, 2004). From the trend, FDI inflows (as a percentage of GDP) were relatively stable and moderately high between 2000 and 2008, during which the exchange rate appreciated slightly, moving from ₦101/$ in 2000 to ₦118/$ in 2008. This relative stability coincided with increased oil revenue inflows and reforms that made Nigeria attractive to foreign investors (UNCTAD, 2009).

However, after 2009, as the naira began to depreciate more sharply—rising from ₦148/$ in 2009 to over ₦645/$ in 2023—FDI as a share of GDP declined significantly, even turning negative in 2022. This suggests that persistent exchange rate depreciation and volatility discouraged long-term FDI commitments, as investors faced uncertainty over repatriating profits and converting earnings (Obadan, 2015). Overall, the relationship shows that periods of exchange rate stability tend to coincide with higher FDI inflows, while persistent depreciation of the naira correlates with declining FDI, reflecting the sensitivity of foreign investors to currency fluctuations in Nigeria.

2.2.3 Foreign Direct Investment and Interest Rate in Nigeria

Interest rate is another critical macroeconomic variable influencing the relationship between FDI and economic growth in Nigeria. High interest rates raise the cost of borrowing, limit domestic investment opportunities, and discourage foreign investors who often seek lower financing costs and stable returns (Obadan, 2004). In contrast, a moderate and stable interest rate regime enhances credit availability, fosters productive investment, and improves the overall investment climate (Adeleke, 2020).

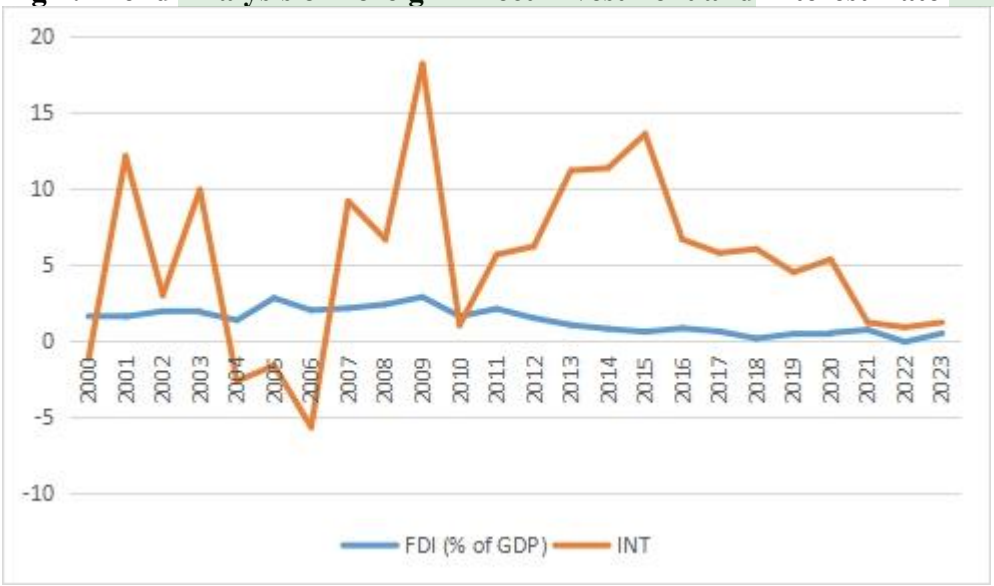
In the Nigerian context, persistent interest rate volatility has been a source of concern for foreign investors. Elevated lending rates increase operational costs for multinational firms and discourage reinvestment of profits, thereby weakening the growth-inducing potential of FDI inflows (Okonkwo & Mordi, 2018). Conversely, when interest rates are managed to encourage productive investment rather than

speculative financial flows, FDI tends to contribute more significantly to output expansion and job creation. Thus, effective monetary policy geared toward maintaining an investor-friendly interest rate structure is central to ensuring that FDI inflows translate into sustainable economic growth in Nigeria.

	FDI (% of GDP)	**INT**
2000	1.64832099	-1.14088864
2001	1.618615558	12.13870249
2002	1.971584135	3.023542279
2003	1.91462057	9.935713381
2004	1.380373875	-2.604847057
2005	2.836294054	-1.593680482
2006	2.035752673	-5.627968048
2007	2.16919537	9.18717123
2008	2.413739183	6.684908634
2009	2.900248732	18.18000167
2010	1.642073692	1.067736065
2011	2.133117702	5.685579859
2012	1.523782338	6.224808614
2013	1.069539365	11.20162222
2014	0.817478468	11.35621302
2015	0.621501637	13.59615325
2016	0.853395743	6.686233623
2017	0.642182922	5.790566865
2018	0.183821496	6.055977158
2019	0.485777628	4.522188496
2020	0.551893509	5.371280211
2021	0.751578312	1.22771853
2022	-0.039126749	0.919231895
2023	0.514645981	1.233050478

Source: World Bank Data (2023).

Fig 4: Trend Analysis of Foreign Direct Investment and Interest Rate in Nigeria.



Source: Author's Computation.

The trend between Foreign Direct Investment (FDI) as a percentage of GDP and interest rate (INT) in Nigeria from 2000 to 2023 presents a fluctuating and somewhat inconsistent relationship. In the early 2000s, FDI hovered around 1.6% to 2.0% of GDP, while interest rates experienced wide swings, beginning at -1.14 in 2000, jumping to over 12.1 in 2001, and then moderating to 3.02 in 2002. By 2003, interest rates rose again to about 9.93, while FDI remained relatively stable at 1.91%. However, in 2004, FDI fell sharply to 1.38% as interest rates turned negative (-2.60), before recovering to 2.83% in 2005 when interest rates were still negative.

Between 2006 and 2010, both variables exhibited high volatility. FDI fluctuated between 2.03% and 2.90%, while interest rates moved from a negative -5.62 in 2006 to as high as 18.18 in 2009, before dropping to a low of 1.06 in 2010.

This period highlights instability, with no clear linear relationship between the two indicators. From 2011 to 2015, FDI experienced a steady decline from 2.13% to 0.62%, while interest rates maintained a generally upward path, climbing from 5.68 in 2011 to 13.59 in 2015. This suggests an inverse relationship, where rising interest rates coincided with reduced FDI inflows.

From 2016 to 2023, FDI inflows remained persistently low, rarely crossing 1% of GDP except in 2016 at 0.85%. By 2018, FDI had dropped drastically to 0.18%, marking one of the lowest points in the series. Although interest rates moderated in this period, ranging between 4.52 and 6.68, FDI showed little sign of recovery, indicating that other structural and macroeconomic factors beyond interest rates may have constrained investment inflows. The years 2020 to 2023 further reinforced this pattern, as FDI remained below 1% despite relatively stable and low interest rates, with 2022 recording a negative inflow (-0.03%).

Overall, the data indicates that Nigeria's FDI performance has weakened over the years, especially after 2010, and that the relationship with interest rates is largely inverse but inconsistent. Periods of high interest rates often coincide with declining FDI, suggesting that rising borrowing costs may deter investment, but even when interest rates were low or negative, FDI did not show a strong recovery, highlighting deeper structural issues within the economy.

2.2.4 Government Policies Regarding Foreign Direct Investment in Nigeria

Government policies have a significant influence on shaping the environment for Foreign Direct Investment (FDI) in Nigeria. These policies are intended to build a favorable climate that secures the interests of foreign investors while also supporting national economic growth. Recognizing the role of FDI in driving diversification, employment generation, and technology transfer, Nigeria has put in place a variety of policy measures to encourage and facilitate inflows of foreign capital (NIPC, 2022).

The regulatory framework guiding FDI attraction is anchored in major legislative and institutional arrangements. The Investment and Securities Act (ISA) of 2007, managed by the Securities and Exchange Commission (SEC), provides transparency and protection for investors. Likewise, the Nigerian Investment Promotion Commission (NIPC) acts as the central agency for promoting and coordinating investment activities, offering investors information on available opportunities, incentives, and relevant regulations, thereby serving as a one-stop facilitator (SEC, 2023).

To encourage foreign participation, the government grants incentives such as tax reliefs, duty concessions, and investment allowances. The Industrial Development (Income Tax Relief) Act, for instance, allows approved industries to benefit from tax holidays for a specified period, thereby making investment in Nigeria more attractive. Furthermore, Free Trade Zones (FTZs) have been established, where businesses can

operate with reduced regulatory burdens and enjoy privileges such as full repatriation of profits and exemptions from certain taxes (World Bank, 2021).

Despite these measures, Nigeria still faces challenges in creating a completely enabling environment for FDI. Persistent issues such as bureaucratic bottlenecks, inconsistent policies, security concerns, and infrastructural gaps often discourage potential investors. In response, the government introduced the Ease of Doing Business reforms to simplify processes, enhance transparency, and cut down the time required to establish and run enterprises. These efforts have been recognized by international development agencies as steps that build investor confidence (World Bank, 2022).

Recent policy initiatives have also emphasized attracting investment into key sectors that are vital for sustainable development, including agriculture, technology, and renewable energy. The Economic Recovery and Growth Plan (ERGP) of 2017 highlighted the importance of FDI in achieving diversification goals by setting sector-specific investment targets. Additionally, Nigeria has pursued bilateral investment treaties (BITs) with several countries to strengthen investor protection and build confidence in its international investment obligations (CBN, 2022).

In summary, Nigeria's approach to FDI policy has been directed toward creating a stable and investor-friendly climate, with strong legal backing, generous incentives, and ongoing reforms. While notable improvements have been made, further work is still required to address structural challenges. Strengthening the policy

framework and maintaining consistency will be crucial in ensuring that Nigeria continues to attract and retain foreign investments necessary for long-term growth and competitiveness.

2.2.5 Positive Impact of Foreign Direct Investment in Nigeria

Foreign Direct Investment (FDI) has been pivotal to Nigeria's economic progress, contributing significantly to various dimensions of national development. The inflow of foreign capital has supported higher productivity, encouraged technological improvements, generated employment, and promoted diversification of the economy. As Nigeria continues to position itself as a favorable hub for global investors, it is essential for policymakers and stakeholders to recognize the beneficial impacts of FDI.

Economic Growth and Development

FDI has been instrumental in driving economic growth in Nigeria by providing much-needed capital to bridge investment gaps in key sectors such as infrastructure, manufacturing, and services. This external capital has supported expanded production capacity, leading to higher output and greater economic activity. The inflow of foreign investment has thus become a catalyst for sustainable economic growth and development.

Job Creation

Another key impact of FDI in Nigeria is its role in employment generation. Foreign firms introduce capital, new practices, and technology that help establish new

industries and strengthen existing ones. This expansion creates direct job opportunities across different sectors including oil and gas, telecommunications, and manufacturing. The jobs generated through FDI not only help reduce unemployment but also improve the standard of living for Nigerians.

Technology Transfer and Innovation

FDI also facilitates the transfer of technology and innovative practices into the Nigerian economy. Multinational corporations bring with them advanced technology and modern management methods that improve efficiency and productivity in local industries. For instance, foreign investment in the telecommunications industry has transformed communication in Nigeria, expanding mobile and internet access. These technological contributions enhance innovation and competitiveness among domestic firms.

Infrastructure Development

Foreign investors often play a vital role in the provision and improvement of infrastructure in Nigeria. Investments in areas such as transportation, energy, and road networks are critical for enabling economic activities. Such infrastructure projects not only serve the interests of investors but also strengthen the business environment, making Nigeria more appealing for future foreign investment.

Economic Diversification

FDI has also been essential in supporting Nigeria's efforts toward economic diversification. Historically reliant on oil revenues, Nigeria has remained vulnerable

to global oil price volatility. However, foreign investments in agriculture, services, and manufacturing have helped broaden the economic base, reducing dependence on oil. These efforts align with the government's wider goal of building a sustainable and resilient economy.

2.2.6 Negative Impact of Foreign Direct Investment in Nigeria

Although Foreign Direct Investment (FDI) offers substantial benefits to the Nigerian economy, it also carries potential downsides that can hinder sustainable development. Recognizing these negative effects is vital for policymakers so they can design strategies that minimize risks while leveraging the benefits of FDI.

Economic Dependency: A major drawback of FDI is the possibility of creating economic dependence on foreign enterprises. With multinational corporations dominating certain sectors, Nigeria risks overreliance on external capital, technologies, and management structures. This situation can stifle the growth of local businesses and weaken indigenous industries, thereby undermining long-term economic resilience. For instance, the overwhelming presence of foreign firms in the oil sector has often left domestic companies struggling to compete effectively.

Capital Flight: FDI may also result in capital flight, as foreign investors frequently repatriate their profits to home countries instead of reinvesting them locally. This outflow reduces the pool of resources available for domestic development, weakening the broader economy. The tendency of multinational companies to prioritize profit

repatriation raises concerns about the sustainability of FDI in Nigeria, since it limits the long-term financial benefits that the host economy can derive.

Environmental Degradation: Environmental concerns are another adverse effect of FDI, particularly in industries such as oil, gas, and mining. Many multinational firms have been criticized for poor environmental standards that result in pollution, deforestation, and the destruction of ecosystems. A clear example is the Niger Delta, where frequent oil spills have caused widespread environmental damage, threatening both livelihoods and community health. Weak enforcement of environmental regulations has enabled some investors to operate unsustainably, aggravating the issue.

Socioeconomic Inequality: FDI may also contribute to rising inequality in Nigeria. While it generates jobs, the benefits are often unevenly distributed across regions and industries, leaving some communities underserved. Furthermore, foreign firms sometimes offer wages that do not meet local expectations, fueling dissatisfaction among workers. This uneven distribution of benefits deepens socioeconomic disparities and can create social tension, despite overall economic gains.

Cultural Erosion: The dominance of foreign firms and products in Nigeria can also erode local culture. As foreign business practices and consumer goods spread, indigenous traditions and values may be overshadowed. This cultural influence can reshape consumer habits and weaken local industries rooted in tradition, leading to a gradual loss of cultural identity among Nigerian communities.

2.2.7 Challenges Facing Foreign Direct Investment in Nigeria

Despite the opportunities FDI provides, Nigeria continues to grapple with several obstacles that undermine its attractiveness to foreign investors. Addressing these challenges is necessary to create a stable and competitive investment environment.

Inadequate Infrastructure: Poor infrastructure remains one of the greatest barriers to FDI in Nigeria. Weak transportation systems, unreliable electricity supply, and insufficient telecommunications create high operational costs and limit efficiency. Frequent power cuts and poor road networks, for instance, hinder production and logistics, reducing Nigeria's competitiveness compared to other destinations.

Bureaucratic Red Tape: Lengthy and complex bureaucratic processes pose another obstacle for investors. Foreign firms often face delays caused by multiple layers of approvals, excessive regulations, and administrative inefficiencies. These barriers increase costs and discourage investment, as businesses seek more transparent and efficient environments.

Security Concerns: Persistent security challenges—including terrorism, insurgency, kidnapping, and community unrest—significantly discourage investment. The Niger Delta has witnessed repeated conflicts linked to resource control, while northern Nigeria faces threats from insurgent groups. Such risks reduce investor confidence and discourage long-term commitments.

Political Instability: Political instability and governance issues also undermine Nigeria's investment climate. Inconsistencies in policy, corruption, and limited transparency create uncertainty, discouraging investors who prefer predictable environments. The perception of high political risk often leads capital to flow into more stable economies, leaving Nigeria at a disadvantage.

Economic Volatility: Nigeria's dependence on oil revenues exposes the economy to global market shocks. Fluctuating oil prices create uncertainty, weakening the confidence of investors and deterring long-term projects. This volatility undermines Nigeria's ability to consistently attract and retain FDI.

Currency Fluctuations: The instability of the Nigerian Naira further complicates investment decisions. Unpredictable exchange rate movements affect profitability and increase financial risks, especially for businesses reliant on imports. Despite efforts by the Central Bank to stabilize the currency, exchange rate volatility remains a major concern for foreign investors.

2.2.8 Solutions to Enhance Foreign Direct Investment in Nigeria

To fully benefit from FDI and address the challenges confronting investors, Nigeria must adopt targeted strategies that strengthen its investment climate. These measures can increase the country's attractiveness and ensure that foreign investment contributes to sustainable growth.

Improving Infrastructure: Upgrading infrastructure is critical to supporting investment. This includes expanding electricity supply, modernizing transportation

networks such as roads, rail, and airports, and strengthening telecommunications. Public-private partnerships can be mobilized to fund these improvements, reducing operational costs and boosting efficiency for foreign businesses.

Streamlining Regulatory Processes: Simplifying regulations and reducing bureaucratic bottlenecks are essential for attracting investment. Implementing digital systems, single-window approvals, and transparent processes will make it easier for investors to establish and run businesses. Strong enforcement of laws that protect investor rights is also needed to inspire confidence.

Strengthening Security Measures: Enhancing security across the country is vital. The government should invest in modern security infrastructure and foster partnerships with both local and international agencies. Efforts to improve community policing and mitigate regional conflicts will make Nigeria safer for investors and residents alike.

Promoting Political Stability: Maintaining political stability and good governance is key to long-term investor confidence. Ensuring accountability, transparency, and rule of law will reduce political risk. Building trust between government, private sector, and civil society will also support a more cooperative investment environment.

Economic Diversification: Nigeria must actively reduce its dependence on oil by channeling investments into sectors such as agriculture, manufacturing, and technology. Targeted incentives for non-oil industries can attract more diversified FDI and shield the economy from external shocks.

Currency Stabilization: Mitigating currency volatility is equally important. Coordinated policies between the Central Bank and government should focus on stabilizing the Naira, strengthening reserves, and adopting flexible exchange policies. A more stable currency will encourage investors to commit to long-term projects without fear of unpredictable losses.

2.3 Theoretical Literature Review

Theories of Foreign Direct Investment (FDI) have been developed to explain the reasons companies expand beyond their domestic boundaries and choose to invest directly in foreign markets rather than depending solely on exports or licensing agreements. These theories shed light on the motivations, strategic benefits, and processes that encourage firms to establish production facilities, acquire ownership stakes, or operate in host countries.

Several key theories stand out in the literature. The Production Cycle Theory of Vernon emphasizes how innovation, product maturity, and competition shape investment decisions across borders. The Theory of Exchange Rate on Imperfect Capital Markets highlights how fluctuations and inefficiencies in currency markets can influence the flow of investment. The Internalization Theory explains why firms prefer to keep control of certain activities within their own structures rather than contracting them out, ensuring efficiency and knowledge protection. Dunning's Eclectic Paradigm (OLI Framework) combines ownership, location, and internalization advantages to provide a comprehensive explanation of FDI patterns.

Beyond firm-level strategies, broader development theories also shed light on FDI. Dependency Theory argues that foreign investment can reinforce economic dependency and inequality between developed and developing nations, as multinational firms often extract resources and profits at the expense of host economies. In contrast, Modernization Theory views FDI as a catalyst for progress, emphasizing its role in transferring technology, management practices, and capital that drive industrialization and modernization in developing economies. Similarly, the Endogenous Growth Theory highlights how FDI can enhance long-term growth by fostering innovation, improving human capital, and encouraging knowledge spillovers that raise productivity within host countries.

Together, these theories provide valuable insights into the complex drivers and consequences of international investment, showing that FDI is not shaped by a single factor but by a combination of economic, financial, technological, and developmental considerations.

2.3.1 Production Cycle Theory of Vernon

The Production Cycle Theory, developed by Raymond Vernon in 1966, provides an explanation for certain patterns of Foreign Direct Investment (FDI), particularly the expansion of U.S. companies into Western Europe after World War II, with a strong focus on the manufacturing sector. Vernon outlined four key stages in the life of a product: innovation, growth, maturity, and decline.

In the innovation phase, U.S. multinational corporations initially developed new products primarily for domestic markets, exporting any surplus to foreign markets where demand existed. Following World War II, European economies experienced rapid reconstruction and rising demand for manufactured goods. With their technological superiority, U.S. companies were able to dominate these markets by supplying innovative products that European firms could not yet replicate.

As the product moved into the growth and maturity stages, the technological edge that initially gave U.S. firms a monopoly advantage began to diminish. The technology behind these products became more widely available, leading to product standardization**.** This enabled European firms to imitate and produce similar goods locally. To counter the rising competition and maintain market dominance, U.S. companies were compelled to establish production facilities within European countries. This allowed them to stay competitive by reducing costs, adapting to local market preferences, and protecting their market share from domestic producers.

The theory was particularly useful in explaining the surge of U.S. FDI in Western Europe between the 1950s and 1970s. Although Vernon acknowledged that U.S. firms did not always enjoy technological advantages across all industries, the production cycle framework captured the broader trend of FDI motivated by innovation, competition, and the need to adapt production geographically as products matured.

2.3.2 The Theory of Exchange Rates on Imperfect Capital Markets

This theory explains foreign direct investment (FDI) by focusing on the role of exchange rate fluctuations in imperfect capital markets. Initially, foreign exchange risk was mostly studied in relation to international trade, but later researchers extended the analysis to FDI. For instance, Itagaki (1981) and Cushman (1985) emphasized uncertainty as a crucial factor influencing firms' investment decisions abroad. Cushman's findings suggested that a rise in the real exchange rate could stimulate FDI from U.S. dollar–based investors, while the appreciation of foreign currencies tended to discourage U.S. FDI, often resulting in a significant decline in investment activity.

Despite its insights, the theory has notable shortcomings. It struggles to account for situations where FDI flows occur simultaneously between countries with different currencies. Supporters of the theory argue that such flows may happen at different points in time, yet evidence of concurrent bilateral investment cycles challenges this claim. This indicates that exchange rate fluctuations alone cannot fully explain FDI patterns, as other structural and strategic factors may also play an important role.

2.3.3 The Internalisation Theory

The Internalisation Theory, originally advanced by Buckley and Casson in 1976 and subsequently refined by Hennart (1982) and Casson (1983), provides an explanation for the expansion of multinational corporations and their decision-making processes regarding foreign direct investment (FDI). Its foundations trace back to

Coase's 1937 analysis of firm organization within a domestic setting, which was later extended to the international arena by Hymer in 1976. Hymer identified two key drivers of FDI: the reduction of competition and the exploitation of firm-specific advantages in certain productive activities.

According to Buckley and Casson, multinational firms internalize their operations in order to create, manage, and transfer unique advantages that can be profitably deployed in foreign markets. This internalization minimizes the transaction costs and uncertainties associated with external market dealings. Dunning later integrated this perspective into his eclectic paradigm, emphasizing its relevance as a partial but significant explanation of global FDI flows. Hennart further expanded the theory by distinguishing between horizontal integration, where firms duplicate similar activities across borders, and vertical integration, where firms control successive stages of production across different countries.

Hymer's contribution remains central, particularly his argument that FDI takes place only when the benefits of firm-specific advantages exceed the additional costs of conducting business abroad. He stressed that FDI decisions are fundamentally strategic and shaped by factors such as market imperfections, institutional barriers, and currency fluctuations, rather than being purely financial transactions in global capital markets.

In the context of Nigeria, the Internalisation Theory provides insight into how multinational firms assess the trade-offs between costs and advantages before

committing to investment. It highlights that FDI inflows into Nigeria are often driven by the desire of firms to internalize control over resources, technology, and production processes, especially in an environment characterized by institutional weaknesses and market imperfections. This makes the theory relevant for understanding the dynamics of FDI and its implications for Nigeria's economic growth.

2.3.4 Dependency Theory

Dependency theory argues that developing economies, such as Nigeria, often become dependent on advanced economies through foreign capital, trade, and investment. The theory suggests that FDI from developed countries can reinforce economic dependency, where host nations rely heavily on external capital and multinational corporations. This dependency may limit the domestic economy's ability to achieve self-sustained growth since profits and resources are often repatriated abroad instead of being reinvested locally.

Applied to Nigeria, dependency theory raises concern about the extent to which FDI truly supports long-term development. Although FDI inflows contribute capital, technology, and infrastructure, much of the investment in Nigeria is concentrated in the oil and gas sector, where multinational corporations dominate. These firms often repatriate a significant portion of their profits, limiting the multiplier effect on Nigeria's economy. Moreover, reliance on foreign investors may reduce incentives for domestic industrialization and local entrepreneurship. Thus, while FDI supports short-term growth, dependency theory cautions that Nigeria could face structural

vulnerabilities if it remains reliant on foreign investors without building strong domestic capacities.

2.3.5 Modernization Theory

Modernization theory presents a contrasting perspective, emphasizing that FDI can serve as a catalyst for industrialization, technological adoption, and economic modernization. According to this theory, developing countries benefit from foreign investment because it introduces advanced technologies, managerial expertise, and new production methods that local firms would otherwise struggle to access. Over time, these external inputs can stimulate productivity growth, enhance human capital, and foster integration into the global economy.

In the Nigerian context, modernization theory highlights the transformative role of FDI in sectors such as telecommunications, banking, and manufacturing. For instance, foreign investment in the telecom sector has significantly improved connectivity, broadened access to mobile and internet services, and increased efficiency in business operations. Additionally, foreign banks and financial institutions have introduced more sophisticated financial products and practices, strengthening Nigeria's financial sector. Through these channels, FDI supports Nigeria's shift from a resource-dependent economy to a more diversified and globally integrated one. Thus, modernization theory supports the argument that FDI has the potential to accelerate Nigeria's journey toward sustainable growth and development.

2.3.6 Eclectic Paradigm (OLI Framework)

The eclectic paradigm, also known as the OLI framework developed by John Dunning, provides a comprehensive lens for understanding FDI. It argues that foreign firms invest abroad when three conditions are satisfied: Ownership advantages (unique assets like technology, patents, or managerial skills), Location advantages (such as natural resources, large markets, or favorable policies), and Internalization advantages (the ability to exploit resources more effectively within their own organizational structure than through licensing or partnerships).

Applying the OLI framework to Nigeria, foreign investors are drawn to the country primarily because of its abundant natural resources, particularly oil and gas (location advantage), its large consumer market, and its strategic geographic position in Africa. Ownership advantages, such as advanced drilling technology or global brand reputation, enable multinational corporations to dominate sectors like oil exploration, telecommunications, and consumer goods. Internalization advantages also play a role since firms prefer direct control over operations to safeguard proprietary technologies and ensure efficiency. However, the framework also highlights a challenge for Nigeria: FDI tends to flow disproportionately into extractive industries where foreign firms retain strong control, limiting spillover effects to the domestic economy. Hence, the eclectic paradigm suggests that while Nigeria benefits from FDI, policies must be designed to enhance linkages between foreign firms and local industries to maximize developmental gains.

2.3.7 Endogenous Growth Theory

Endogenous growth theory emphasizes the importance of knowledge, innovation, and human capital as the main drivers of long-term economic growth. From this perspective, FDI contributes to growth not only by providing capital but also by facilitating technology transfer, knowledge diffusion, and skill development. Unlike dependency theory, endogenous growth theory sees foreign investment as a critical channel for learning and innovation in developing economies.

In the Nigerian context, this theory underscores how FDI can generate positive spillover effects in non-oil sectors. For example, foreign manufacturing firms bring modern production processes that local employees can learn from, thereby upgrading the domestic skill base. Similarly, investment in sectors such as renewable energy, ICT, and agro-processing can stimulate research and innovation, helping Nigeria diversify away from oil dependence. However, for the benefits predicted by endogenous growth theory to fully materialize, Nigeria must improve institutional quality, strengthen property rights, and invest in education and infrastructure. Without these complementary factors, the potential of FDI to stimulate innovation and human capital development may remain underutilized.

2.4 Empirical Literature Review

Empirical studies on the impact of foreign direct investment (FDI) on economic growth have produced diverse findings across different contexts. While some studies affirm that FDI significantly enhances growth by transferring technology,

boosting capital accumulation, and improving productivity, others argue that its benefits depend on host-country conditions such as institutional quality, absorptive capacity, and macroeconomic stability. Below is a review of selected empirical studies conducted mostly in Nigeria and other developing economies from 2015 till date.

Abubakar and Bala (2017), in their study on Nigeria, examined the topic *"Foreign Direct Investment and Economic Growth in Nigeria"* covering the period 1981–2015. Using the autoregressive distributed lag (ARDL) bounds testing approach, they found that FDI has a significant long-run positive impact on Nigeria's economic growth, though the short-run impact was weaker.

Adegbite and Ayadi (2019), focusing on West Africa, analyzed the impact of FDI on economic development across the ECOWAS sub-region. Employing a panel data methodology, their study revealed that while FDI promotes growth in larger economies such as Nigeria and Ghana, smaller economies face challenges in leveraging FDI due to weak institutional frameworks.

Adelakun (2020) investigated the role of FDI inflows on Nigeria's non-oil sector growth from 1985 to 2018. Using the Vector Error Correction Model (VECM), the study found that FDI had a positive but statistically insignificant effect on the non-oil sector, suggesting that Nigeria's reliance on oil limits the growth benefits of FDI.

Adewumi and Aluko (2018) studied *"Foreign Direct Investment, Human Capital, and Growth in Nigeria"* from 1980 to 2016. Applying the ARDL technique,

they concluded that FDI contributes positively to growth only when human capital development is strong, emphasizing the role of education and skill acquisition.

Ajayi and Omotayo (2017) focused on Nigeria's economy from 1980 to 2015, using an Ordinary Least Squares (OLS) regression approach. Their findings indicated that while FDI positively affects GDP growth, macroeconomic instability reduces its overall impact, calling for stable policy frameworks.

Aliyu and Yusuf (2019), in their study on Nigeria, explored the nexus between FDI, exchange rate, and economic growth. Using time series data from 1981–2017 and applying the ARDL model, they found that exchange rate volatility significantly dampens the growth effects of FDI inflows.

Chukwu and Agu (2018) investigated the relationship between FDI and manufacturing output in Nigeria between 1980 and 2016. Employing co-integration and error correction techniques, they discovered that FDI inflows had a significant positive effect on manufacturing output in the long run, but short-run effects were weak.

Ekeocha and Nwokoye (2016) examined FDI and industrial development in Nigeria from 1985 to 2015. Using the Johansen co-integration approach, they found that FDI inflows have contributed positively to industrial sector growth but stressed that policy inconsistencies hindered maximum benefits.

Emeka and Ifeanyi (2020), in their Nigerian study covering 1980–2018, investigated FDI and employment generation using an ARDL model. Their results

revealed that while FDI significantly increased GDP, its effect on employment generation was minimal, suggesting jobless growth.

Ibrahim and Musa (2019) analyzed FDI inflows and economic diversification in Nigeria. Using a VECM approach with data from 1981–2016, their findings showed that FDI is concentrated in the oil sector, limiting its impact on diversification and inclusive growth.

John and Olayemi (2017) conducted a study on FDI and agricultural sector performance in Nigeria. Using OLS regression on data covering 1980–2014, they found that FDI positively influenced agricultural output, though inadequate infrastructure constrained full realization of its benefits.

Mohammed and Hassan (2018) carried out research on the relationship between FDI, trade openness, and growth in Nigeria from 1981–2016. Employing ARDL analysis, they concluded that trade openness mediates the positive effects of FDI on growth, suggesting that policies promoting exports can enhance the benefits of FDI.

Nnamdi and Okeke (2016) investigated FDI inflows and technological transfer in Nigeria. Using econometric analysis on data spanning 1980–2015, they found that while FDI has facilitated technology transfer, absorptive capacity within Nigeria's industries remains low, thereby limiting productivity gains.

Ogunleye and Adebayo (2019) studied FDI and financial sector development in Nigeria between 1986 and 2017. Applying co-integration and ECM analysis, they

found that FDI inflows significantly contributed to financial deepening and capital market expansion, thereby enhancing growth.

Okafor and Ojo (2020) explored the dynamic effects of FDI on economic growth in Nigeria from 1981–2018. Using ARDL methodology, they found that FDI has a long-run positive effect on growth but identified corruption and poor infrastructure as major constraints.

Olaleye and Bello (2015) focused on the impact of FDI inflows on poverty reduction in Nigeria. Employing time series regression from 1980–2013, they revealed that while FDI contributed to GDP growth, its effect on poverty reduction was negligible due to inequality and weak labor absorption.

Olawale and Akinyemi (2017) examined the relationship between FDI, capital formation, and growth in Nigeria. Using ARDL methodology, they established that FDI significantly boosts capital formation, which in turn enhances long-term economic growth.

Onyema and Joseph (2019), in their study covering Nigeria between 1980 and 2016, investigated FDI, infrastructure, and economic performance using VECM. Their findings showed that FDI inflows improved infrastructure development, which then stimulated economic growth.

Usman and Yakubu (2020) analyzed the impact of FDI on inclusive growth in Nigeria. Using ARDL on data from 1985–2018, their study concluded that while FDI

increases GDP, it fails to significantly reduce income inequality, suggesting that FDI benefits are not evenly distributed.

Yusuf and Ali (2018) explored FDI and human development in Nigeria from 1981–2015. Applying the co-integration technique, they found that while FDI positively influenced economic growth, its effect on human development indicators such as health and education remained limited.

2.5 Gaps to be Filled in Literature Review

Despite the growing body of empirical studies on Foreign Direct Investment (FDI) and economic growth in Nigeria, several critical gaps remain unaddressed. First, while many studies (e.g., Akinlo, 2015; Eze & Okonkwo, 2017; Ayadi, 2019) have established either positive or negative links between FDI and economic growth, their conclusions are often inconsistent, reflecting methodological differences, short timeframes, or reliance on secondary aggregate data. This leaves uncertainty about the true magnitude and direction of FDI's contribution to Nigeria's economic growth.

Secondly, most studies have focused on FDI inflows in aggregate form without adequately considering sectoral decomposition of FDI (e.g., agriculture, manufacturing, oil and gas, telecommunications). This creates a gap in understanding whether some sectors benefit more from FDI than others and whether FDI contributes to structural transformation of the Nigerian economy.

Thirdly, much of the existing literature has examined FDI within the context of traditional growth theories, but there is limited incorporation of modern theoretical

perspectives such as the endogenous growth theory, dependency theory, and exchange rate-based explanations. The neglect of these frameworks creates a theoretical gap in explaining the nuanced role of FDI in shaping Nigeria's long-term development trajectory.

Fourthly, while some studies have applied time-series econometric techniques such as OLS, ECM, and Johansen co-integration, very few have employed more robust modern estimation techniques like ARDL, VAR, or GMM that account for structural breaks, short-run and long-run dynamics, and endogeneity issues. This methodological gap weakens the reliability of policy recommendations derived from existing findings.

Fifthly, although the Nigerian economy has undergone significant policy shifts, particularly with the introduction of investment-friendly reforms, exchange rate liberalization, and recent global shocks (COVID-19, oil price volatility), most existing studies end before 2020 and fail to capture how recent global and domestic developments have reshaped the FDI–growth nexus.

Finally, many studies have concentrated on the direct effect of FDI on growth, overlooking the mediating or moderating roles of key macroeconomic variables such as human capital development, infrastructure, exchange rate stability, and institutional quality. This creates a gap in understanding the conditions under which FDI can most effectively stimulate sustainable growth in Nigeria.

Based on these gaps, the present study contributes to the literature by (1) employing the ARDL approach to examine both short-run and long-run dynamics

between FDI and economic growth, (2) extending the scope of analysis to recent years (up to 2023) to capture the effects of new global and domestic realities, and (3) integrating broader theoretical perspectives to provide a more holistic explanation of FDI's role in Nigeria's economic development.

CHAPTER THREE

THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the theoretical framework for the empirical analysis of the impact of Foreign Direct Investment (FDI) on Nigeria economic growth is examined. The study adopts the OLI model as the theoretical framework (and an econometric model is developed based on the theoretical framework). The research methodology is also examined, while the sources of data and the data analysis methods are presented in the sub section.

3.2 Theoretical Framework

This study is anchored on the eclectic paradigm, also known as the OLI model, developed by John Dunning. The paradigm explains foreign direct investment (FDI) in terms of three key advantages: Ownership, Location, and Internalization. In the Nigerian context, the framework implies that the inflow of FDI is shaped by location-specific factors such as macroeconomic stability and investment conditions. Indicators like real GDP growth rate capture the size and potential of the domestic, Similarly, the stability of the inflation rate signals economic predictability, which is critical for investor confidence, whereas the exchange rate influences the relative attractiveness of the Nigerian market to foreign investors. Thus, the eclectic paradigm provides a useful lens for examining how these macroeconomic factors drive FDI inflows and, in turn, their impact on Nigeria's economic growth.

The model integrates three sets of advantages Ownership (O), Location (L), and Internalization (I), which jointly determine the extent, pattern, and form of foreign production.

Step 1: The General Functional Form

According to Dunning, a firm will engage in FDI if and only if it possesses Ownership advantages (O), finds Location advantages (L) in the host country, and gains from Internalization (I) of its operations. This relationship can be expressed functionally as:

$$FDI_t = f(O_t, L_t, I_t) \qquad (3.1)$$

where:

- FDI_t= foreign direct investment inflows at time *t*
- O_t= ownership-specific advantages
- L_t= location-specific advantages
- I_t= internalization-specific advantages

Step 2: Ownership Advantages

Ownership advantages refer to firm-specific assets that provide competitive superiority over local firms in the host market, such as technology, managerial expertise, innovation, brand name, or access to capital. Formally, this can be expressed as: $$O_t = f(T_t, M_t, S_t) \qquad (3.2)$$

where:

- T_t= technological capability,
- M_t= managerial or organizational skills,
- S_t= scale or scope economies.

These factors determine the ability of a firm to successfully compete abroad.

Step 3: Location Advantages

Location advantages are host-country attributes that attract foreign investors. They include market size, macroeconomic stability, infrastructure quality, resource availability, and institutional framework. This relationship can be written as:

$$L_t = f(GDP_t, INF_t, EXR_t, INST_t, RES_t) \qquad (3.3)$$

where:

- GDP_t= real gross domestic product (market size and growth potential),
- INF_t= inflation rate (price stability),
- EXR_t= exchange rate stability,
- $INST_t$= institutional quality or governance,
- RES_t= natural resource endowment.

In the context of Nigeria, these location factors are the principal drivers of FDI inflows, as firm-level ownership and internalization advantages are largely external to the domestic economy.

Step 4: Internalization Advantages

Internalization advantages arise when it is more profitable for a firm to internalize production and distribution activities rather than licensing or outsourcing. This can be expressed as:

$$I_t = f(TC_t, IPP_t, QC_t) \qquad (3.4)$$

where:

- TC_t= transaction cost savings,
- IPP_t= protection of intellectual property and proprietary assets,
- QC_t= control over quality and coordination.

The greater the internalization advantage, the higher the likelihood of direct investment rather than indirect entry modes.

Step 5: The Combined Dunning Model

Combining Equations (3.2), (3.4) into (3.1), we obtain the generalized OLI model:

$$FDI_t = f[T_t, M_t, S_t; GDP_t, INF_t, EXR_t, INST_t, RES_t; TC_t, IPP_t, QC_t] \qquad (3.5)$$

This equation summarizes Dunning's original framework: FDI inflows depend simultaneously on firm-specific (O), country-specific (L), and internalization (I) advantages. The model for our study is formulated from the above theoretical framework which is given by:

$$GDP = f(FDI, EXR, INT, INF)$$

where:

GDP represents Gross Domestic Product,

FDI is Foreign Direct Investment,

INT is the Interest Rate,

INF is the Inflation Rate, and

EXR is the Exchange Rate.

This model structure allows us to evaluate how variations in these economic indicators affect FDI inflows.

3.3 Variables of the Study

This study employs annual time series data covering the period 1981 to 2023 to examine the impact of Foreign Direct Investment (FDI) on economic growth in Nigeria. The variables used in the model include Economic Growth (GDP), Foreign Direct Investment (FDI), Interest Rate (INT), Inflation Rate (INF), and Exchange Rate (EXR).

Economic Growth (GDP): In this study, economic growth serves as the dependent variable, measured by the annual growth rate of the Gross Domestic Product (GDP). GDP growth rate reflects the overall performance and productivity of the Nigerian economy by capturing how effectively resources are utilized to increase national output over time. A positive GDP growth rate indicates improvement in economic activity, while a decline reflects stagnation or contraction. This variable provides a comprehensive measure of economic performance, encompassing both industrial and non-industrial sectors.

Foreign Direct Investment (FDI): Foreign Direct Investment represents the main independent variable of interest in this study. It is measured as the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in enterprises operating in Nigeria. FDI brings in capital, technology, managerial expertise, and access to international markets, all of which can stimulate industrial development and overall economic growth. However, the actual impact of FDI on growth may depend on the absorptive capacity of the host economy, institutional quality, and the sectoral allocation of such investments.

Interest Rate (INT): The interest rate represents the cost of borrowing or return on savings in the economy, and it serves as a key monetary policy instrument influencing investment and consumption decisions. In this study, it is measured by the annual average lending rate of deposit money banks in Nigeria. Lower interest rates typically encourage borrowing and investment, stimulating production and growth. Conversely, higher rates may discourage investment and slow down economic activity, though they can also help curb inflationary pressures.

Inflation Rate (INF): Inflation rate captures the annual percentage change in the consumer price index (CPI) and serves as a measure of price stability in the economy. Moderate inflation is often associated with growing demand and economic expansion, but persistently high inflation erodes purchasing power, distorts price signals, discourages investment, and creates macroeconomic uncertainty. Therefore, this

variable is crucial for assessing how price instability influences economic performance in Nigeria over the study period.

Exchange Rate (EXR): Exchange rate represents the value of the Nigerian Naira relative to the U.S. Dollar**,** serving as a critical indicator of external sector performance. It affects the competitiveness of Nigerian exports, the cost of imports, and the flow of foreign investment. An appreciation of the naira may reduce export competitiveness but lower import costs, while depreciation can boost exports but increase inflation through higher import prices. Exchange rate volatility can also influence investor confidence and the overall stability of the Nigerian economy.

3.4 Model Specification

Following the theoretical framework, the econometric model to examine the impact of Foreign Direct Investment on economic Growth in Nigeria is specified as:

$$GDPGR_t = \beta_o + \beta_1.FDI_t + \beta_2.LNEXR_t + \beta_3.INT_t + \beta_4.LNINF_t + \mu_t$$

Where;

$GDPGR_t$ is the gross domestic product growth rate at time t.

FDI_t is the Foreign Direct Investment at time t.

$LNEXR_t$ is the natural logarithm of the Exchange Rate at time t.

INT_t is the Interest Rate at time t.

$LNINF_t$ is the Inflation Rate at time t.

β0 is the intercept,

β1, β2, β3and β4 are coefficients of the independent variables, and

μ is the error term.

This formulation helps analyse the sensitivity of FDI to changes in these economic variables and tests the hypothesis regarding their influence.

3.4.1 Apriori Expectations

Based on economic theory and previous empirical evidence, the expected signs of the explanatory variables in relation to the impact of Foreign Direct Investment (FDI) on economic growth in Nigeria are as follows:

Foreign Direct Investment (FDI): FDI is expected to have a positive (+) relationship with economic growth. Theoretically, FDI facilitates capital inflows, technology transfer, managerial skills, and access to global markets, all of which enhance productive capacity. In Nigeria, FDI is expected to fill the savings–investment gap, stimulate industrial productivity, and create employment opportunities. Consequently, an increase in FDI inflows should lead to higher GDP growth.

Exchange Rate (EXR): The exchange rate is expected to exhibit a negative (–) relationship with economic growth. Nigeria's high dependence on imports implies that exchange rate depreciation raises import costs, fuels inflationary pressures, and discourages investment, thereby constraining growth. Although currency depreciation can improve export competitiveness in theory, in Nigeria's case, the negative effects of inflation and uncertainty tend to dominate.

Interest Rate (INT): The interest rate is expected to have a negative (–) effect on economic growth. High lending rates raise the cost of borrowing, deter investment,

and limit business expansion. In Nigeria, persistently high interest rates have constrained private sector productivity and discouraged both domestic and foreign investment. Conversely, moderate and stable interest rates can foster investment and support growth, but the overall theoretical expectation remains negative.

Inflation Rate (INF): Inflation is expected to have a negative (–) effect on economic growth. High inflation erodes purchasing power, distorts price signals, and creates macroeconomic uncertainty that undermines investment and output. In Nigeria, inflation often stems from structural inefficiencies and exchange rate instability, both of which hinder economic performance. While moderate inflation may indicate healthy demand, its persistent rise tends to harm growth.

These expectations provide the theoretical foundation for interpreting the coefficients of the regression model.

Table 3.1: Expected Apriori Signs

Variable	Symbol	Expected Sign	Justification
Foreign Direct Investment	FDI	+	Brings capital inflows, technology transfer, managerial skills, and market access, thereby boosting productivity and GDP.
Exchange Rate	LNEXR	–	Depreciation raises import costs, fuels inflation, and discourages investment, constraining economic growth.
Interest Rate	INT	–	High borrowing costs reduce investment and output, while moderate rates encourage productive investment.
Inflation Rate	LNINF	–	High inflation erodes purchasing power, distorts prices, and discourages savings and investment.

Source: Author's Computation (2025)

3.5 Data and Econometric Methodology

This study employs the Autoregressive Distributed Lag (ARDL) methodology to examine the impact of Foreign Direct Investment (FDI) on economic growth in Nigeria over the period 1981 to 2023. The ARDL technique, developed by Pesaran and Shin (1999), is a robust econometric approach that allows for the analysis of both short-run and long-run relationships among variables within a single-equation framework. It is particularly advantageous in situations where the variables are integrated of different orders—specifically, a combination of I(0) and I(1)—without the need for all variables to be stationary at the same level. This flexibility makes ARDL highly suitable for studies dealing with macroeconomic and financial time series data, especially in developing economies like Nigeria, where data irregularities and fluctuations are common.

The ARDL model is based on the estimation of an Error Correction Model (ECM), which simultaneously captures the short-run dynamics and the long-run equilibrium relationships among the variables. One of its major strengths lies in its ability to produce consistent and unbiased long-run estimates even in the presence of small sample sizes, a common limitation in time-series studies covering developing economies. The estimation procedure begins with the application of the Augmented Dickey-Fuller (ADF) test to determine the stationarity properties and order of integration of each variable. This is followed by the bounds testing procedure, which is used to establish the presence of long-run cointegration relationships among the

variables. Finally, both the short-run and long-run coefficients are estimated to assess the magnitude, direction, and speed of adjustment of economic growth in response to changes in FDI, exchange rate, interest rate, and inflation.

To ensure the robustness and reliability of the results, several diagnostic tests will be carried out. The Breusch-Godfrey serial correlation LM test will be employed to detect the presence of autocorrelation, while the Breusch-Pagan-Godfrey test will be used to check for heteroscedasticity.

Overall, this methodology provides a comprehensive framework for evaluating the dynamic interactions between foreign direct investment and economic growth in Nigeria, offering both statistical precision and policy relevance.

Table 3.2: Summary of Variables and Data Sources

Variable	Measurement/Description	Data Source
Economic Growth	GDP growth rate (annual %)	World Development Indicators (WDI), World Bank
Foreign Direct Investment	Foreign direct investment inflow (annual %)	World Development Indicators (WDI), World Bank
Exchange Rate	Exchange rate	World Development Indicators (WDI), World Bank
Interest Rate	Real interest rate	World Development Indicators (WDI), World Bank
Inflation Rate	Inflation rate	World Development Indicators (WDI), World Bank

Source: Author's Computation (2025)

The study utilizes annual time series data covering the period 1981 to 2023, obtained exclusively from the World Bank's World Development Indicators (WDI)

database. The data are considered reliable and comprehensive for examining the long-run and short-run relationships between foreign direct investment and economic growth in Nigeria.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF EMPIRICAL RESULTS

4.1 Introduction

This chapter outlines the descriptive statistics of the model and conducts a correlation analysis to examine the relationships among the variables. It also includes an initial assessment of multicollinearity to determine the degree of interdependence among the explanatory variables. A unit root test was carried out to confirm the stationarity of the data series. To investigate the existence of a long-run equilibrium relationship and evaluate convergence, the ARDL bounds co-integration approach was applied. Furthermore, residual and stability diagnostic tests were performed to ensure the robustness of the empirical results. The study analyzes the gross domestic product growth rate, foreign direct investment, interest rate, exchange rate, and inflation rate using data covering a 43-year period from 1981 to 2023.

4.2 Descriptive Statistics

Table 4.1: Descriptive Statistics

	GDPGR	FDI	INT	LNEXR	LNINF
Mean	3.042	1.221	0.483	3.721	2.699
Median	3.252	1.070	3.024	4.775	2.565
Maximum	15.329	4.282	18.180	6.470	4.288
Minimum	-13.128	-0.039	-65.857	-0.482	1.684
Std. Dev.	5.256	0.946	13.916	2.041	0.665
Skewness	-0.839	0.947	-2.789	-0.806	0.811
Kurtosis	4.846	3.761	13.562	2.447	2.950
Jarque-Bera	11.152	7.462	255.600	5.204	4.718

Probability	0.004	0.024	0.000	0.074	0.095
Sum	130.812	52.512	20.749	159.993	116.043
Sum Sq. Dev.	1160.196	37.573	8133.748	174.892	18.597
Observations	43	43	43	43	43

Source: Author's Computation using E-views (2025).

The descriptive statistics for the study variables reveal important insights into their distribution and variability over the period 1981 to 2023. The mean GDP growth rate (GDPGR) is 3.042%, with a median of 3.252%, indicating a slightly left-skewed distribution, supported by a negative skewness of -0.839. Foreign direct investment (FDI) has a positive mean of 1.221 and a median of 1.070, showing moderate inflows and a slight positive skewness of 0.947. The interest rate (INT) exhibits extreme fluctuations, with a mean of 0.483 and a very low minimum of -65.857, reflected in a high negative skewness of -2.789 and a leptokurtic distribution (kurtosis = 13.562), suggesting the presence of outliers. The exchange rate (LNEXR) and inflation rate (LNINF) have means of 3.721 and 2.699, respectively, and display moderate variability, with standard deviations of 2.041 and 0.665. LNEXR is slightly negatively skewed (-0.806) while LNINF is positively skewed (0.811), indicating asymmetry in their distributions. The Jarque-Bera test shows that GDPGR, FDI, and INT deviate significantly from normality at the 5% level, whereas LNEXR and LNINF do not, implying approximate normality for these variables. Overall, GDPGR ranges from -13.128% to 15.329%, FDI from -0.039 to 4.282, INT from -65.857 to 18.180, LNEXR from -0.482 to 6.470, and LNINF from 1.684 to 4.288, highlighting variability across

the dataset. The dataset includes 43 observations for each variable, ensuring consistency in the analysis. These statistics provide a preliminary understanding of the behavior and distribution of the variables, which is crucial for further econometric modeling.

4.3 Correlation Analysis

Table 4.2: Correlation Analysis

	GDPGR	FDI	INT	LNEXR	LNINF
GDPGR	1.000	0.435	0.371	0.230	-0.254
FDI	0.435	1.000	-0.018	0.051	0.008
INT	0.371	-0.018	1.000	0.396	-0.551
LNEXR	0.230	0.051	0.396	1.000	-0.025
LNINF	-0.254	0.008	-0.551	-0.025	1.000

Source: Author's Computation using E-views (2025).

The correlation analysis reveals the relationships among the study variables. GDP growth rate (GDPGR) is moderately positively correlated with foreign direct investment (FDI) at 0.435, indicating that higher FDI inflows are associated with higher economic growth. GDPGR also shows weaker positive correlations with interest rate (0.371) and exchange rate (0.230), while it has a slight negative correlation with inflation (-0.254), suggesting that rising inflation may modestly hinder economic growth. Foreign direct investment exhibits negligible correlations with interest rate (-0.018), exchange rate (0.051), and inflation (0.008), implying that FDI movements are largely independent of these macroeconomic variables. Interest rate (INT) is moderately positively correlated with exchange rate (0.396), reflecting a potential link

between higher interest rates and currency appreciation, and shows a strong negative correlation with inflation (-0.551), consistent with conventional monetary theory where increased interest rates help curb inflation. Exchange rate (LNEXR) displays very weak associations with GDPGR (0.230), FDI (0.051), and inflation (-0.025), indicating minimal direct impact on these variables. Inflation (LNINF) is moderately negatively correlated with interest rate (-0.551) and weakly negatively correlated with GDPGR (-0.254), suggesting that higher inflation may dampen economic growth and that monetary policy plays a role in moderating price levels. Overall, the correlation matrix highlights the varying degrees of association between the key macroeconomic variables in the study.

4.4 Pre-Test Assessments

These assessments aim to examine and confirm specific conditions or assumptions prior to model estimation to ensure that the results are reliable and accurate. This step is essential in econometric and statistical analysis, as it helps detect potential issues that could compromise the precision of the model's estimates. Key tests conducted include the unit root test, which evaluates the stationarity of the variables, and the ARDL bounds co-integration test, which determines whether multiple time series variables exhibit a long-term equilibrium relationship.

4.5 Unit Root Test

The unit root test is divided into unit root test at levels and at first difference

Variables	ADF Test Statistics Prob value	ADF Critical Value (prob value)			Order of Integration	Remarks
		1% Level	5% Level	10% level		
FDI	0.0055	0.01	0.05	0.1	I(0)	Stationary
GDPGR	0.0244	0.01	0.05	0.1	I(0)	Stationary
INT	0.0000	0.01	0.05	0.1	I(0)	Stationary
LNEXR	0.3144	0.01	0.05	0.1	I(0)	Non-stationary
LNINF	0.0122	0.01	0.05	0.1	I(0)	Stationary

Table 4.3a: Unit Root Test (At Levels)

Source: Author's Computation using E-views (2025).

The Augmented Dickey-Fuller (ADF) test was conducted to examine the stationarity of the study variables. The results indicate that foreign direct investment (FDI) is stationary at level with a p-value of 0.0055, which is less than the 5% significance level, confirming that it is integrated of order zero, I(0). Similarly, GDP growth rate (GDPGR) is stationary at level, with a p-value of 0.0244, and interest rate (INT) is also stationary at level with a highly significant p-value of 0.0000, both indicating I(0) integration. Inflation (LNINF) is stationary at level as well, with a p-value of 0.0122, suggesting it is I(0). In contrast, the exchange rate (LNEXR) is non-stationary at level, having a p-value of 0.3144, which exceeds the conventional significance thresholds, indicating that it does not satisfy the stationarity condition at level. Overall, the results suggest that most variables are stationary at level, except for

LNEXR, which may require differencing or transformation before inclusion in time series modeling to avoid spurious regression results.

Variables	ADF Test Statistics Prob value	ADF Critical Value (prob value)			Order of Integration	Remarks
		1% Level	5% Level	10% level		
FDI	0.0000	0.01	0.05	0.1	I(1)	Stationary
GDPGR	0.0000	0.01	0.05	0.1	I(1)	Stationary
INT	0.0000	0.01	0.05	0.1	I(1)	Stationary
LNEXR	0.0000	0.01	0.05	0.1	I(1)	Stationary
LNINF	0.0000	0.01	0.05	0.1	I(1)	Stationary

Table 4.3b: Unit Root Test (At First Difference)

Source: Author's Computation using E-views (2025).

The Augmented Dickey-Fuller (ADF) test was performed to determine the stationarity of the study variables. The results show that all variables foreign direct investment (FDI), GDP growth rate (GDPGR), interest rate (INT), exchange rate (LNEXR), and inflation (LNINF) are stationary at first difference, with p-values of 0.0000, which are well below the 5% significance level. This indicates that all variables are integrated of order one, I(1). Being stationary at first difference suggests that while the original series may contain trends or non-stationarity, differencing transforms them into stationary series suitable for time series analysis. Consequently, these results satisfy a key requirement for co-integration analysis and further econometric modeling.

In summary, the results reveal that all the variables achieve stationarity after first differencing, making them suitable for further analysis within the ARDL framework.

4.6 Co-Integration Tests

Once it was confirmed that the variables follow a unit root process and are integrated of order I(1), the ARDL bounds test was employed to examine the existence of co-integration. Since the variables are stationary at first difference, this test assesses whether a stable long-term equilibrium relationship exists among them. The co-integration analysis is crucial for determining whether the variables exhibit a consistent long-run association within the multivariate framework. If co-integration is present, it indicates that the variables tend to move together over time in a sustained long-run relationship. The results of this analysis are provided in the following tables.

4.6.1 ARDL Bound Test

Table 4.4: ARDL Bound Test

Test Statistic	Value	k
F-statistic	11.41107	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06
Test Statistic	Value	k

F-statistic	4.256339	3
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: Author's Computation using E-views (2025).

The ARDL bounds test was conducted to examine the existence of a long-run equilibrium relationship among the study variables. In the first model, the computed F-statistic is 11.411, which is well above the upper bound critical value of 5.06 at the 1% significance level. This indicates strong evidence of co-integration among the four variables in the model, suggesting that they share a stable long-term relationship. In the second model, the F-statistic is 4.256, which also exceeds the lower bound critical values at 5% significance (I0 bound = 3.23), though it is slightly below the upper bound at 5% (I1 bound = 4.35). This implies moderate evidence of co-integration among the three variables, indicating the presence of a long-run equilibrium, albeit less pronounced than in the first model. Overall, the bounds test results confirm that the variables move together over time, validating the suitability of estimating both long-run and short-run dynamics using the ARDL approach.

4.6.2 Error Correct Model Analysis

Table 4.5a: ARDL ECM and Long Run Form

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR(-1))	-0.233768	0.174224	-1.341769	0.1964
D(GDPGR(-2))	0.250104	0.140237	1.783444	0.0914
D(GDPGR(-3))	0.185121	0.095717	1.934044	0.0690
D(FDI)	-1.570871	0.595033	-2.639974	0.0166
D(FDI(-1))	-2.242460	0.543018	-4.129625	0.0006
D(FDI(-2))	-0.203086	0.456629	-0.444750	0.6618
D(FDI(-3))	2.797123	0.428142	6.533159	0.0000
D(INT)	0.045222	0.051148	0.884154	0.3883
D(INT(-1))	0.053464	0.051358	1.041012	0.3117
D(INT(-2))	0.091549	0.051839	1.766019	0.0943
D(LNEXR)	-8.015292	1.753069	-4.572149	0.0002
D(LNINF)	-2.936566	0.778768	-3.770787	0.0014
D(LNINF(-1))	4.867365	1.145868	4.247754	0.0005
D(LNINF(-2))	2.262307	1.300032	1.740193	0.0989
D(LNINF(-3))	-3.227354	0.881233	-3.662318	0.0018
CointEq(-1)	-0.443831	0.203364	-2.182445	0.0426

Cointeq = GDPGR - (-2.3214*FDI -0.2377*INT -0.7268*LNEXR
-5.2456
*LNINF + 27.8194)

Source: Author's computation using E-views (2025).

The ARDL cointegrating results indicate a stable long-run relationship among the variables, as shown by the error correction term, CointEq(-1), which has a coefficient of -0.444 and is significant at the 5% level (p = 0.043). This suggests that about 44% of any short-term deviation from equilibrium is corrected in the following

period. In the short run, foreign direct investment (FDI) exhibits mixed effects on GDP growth, with some lags negatively impacting growth and others positively, highlighting dynamic adjustments over time. Interest rate (INT) has minimal short-run influence, as its coefficients are mostly insignificant. Exchange rate (LNEXR) negatively and significantly affects GDP growth, implying that depreciation dampens growth. Inflation (LNINF) shows both positive and negative short-run effects depending on the lag, reflecting complex interactions with GDP. Overall, the results confirm both significant short-run dynamics and a robust long-term equilibrium among the variables..

Table 4.5b: Long Run Form

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	-2.321393	3.107864	-0.746942	0.4647
INT	-0.237718	0.345296	-0.688448	0.4999
LNEXR	-0.726766	0.858374	-0.846678	0.4083
LNINF	-5.245609	5.160857	-1.016422	0.3229
C	27.819412	20.565845	1.352700	0.1929

Source: Author's computation using E-views (2025).

The long-run coefficient estimates from the ARDL model reveal the effects of the explanatory variables on GDP growth over the long term. Foreign direct investment (FDI) has a negative coefficient of -2.321, suggesting an inverse

relationship with GDP growth, although it is not statistically significant (p = 0.465). Similarly, interest rate (INT) shows a negative long-run effect (-0.238) that is also insignificant (p = 0.500), indicating limited impact on GDP growth in the long term. Exchange rate (LNEXR) and inflation (LNINF) both have negative coefficients (-0.727 and -5.246, respectively), but neither is statistically significant, implying that changes in these variables do not have a measurable long-term effect on GDP growth in this sample. The constant term (C) is positive at 27.819 but also statistically insignificant (p = 0.193). Overall, while the coefficients suggest that increases in FDI, interest rate, exchange rate, and inflation could reduce GDP growth, the lack of statistical significance indicates that these long-run effects are not strongly supported by the data.

4.7 Interpretation of ARDL Model Estimate

Table 4.6: Raw Output Analysis

Dependent Variable: GDPGR
Method: ARDL
Date: 09/03/25 Time: 04:12
Sample (adjusted): 1985 2023
Included observations: 39 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): FDI INT LNEXR LNINF
Fixed regressors: C
Number of models evalulated: 2500
Selected Model: ARDL(4, 4, 3, 1, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*

GDPGR(-1)	0.322401	0.113943	2.829482	0.0111
GDPGR(-2)	0.483872	0.120860	4.003584	0.0008
GDPGR(-3)	-0.064983	0.114492	-0.567571	0.5773
GDPGR(-4)	-0.185121	0.095717	-1.934044	0.0690
FDI	-1.570871	0.595033	-2.639974	0.0166
FDI(-1)	0.892143	0.515794	1.729650	0.1008
FDI(-2)	2.242460	0.543018	4.129625	0.0006
FDI(-3)	0.203086	0.456629	0.444750	0.6618
FDI(-4)	-2.797123	0.428142	-6.533159	0.0000
INT	0.045222	0.051148	0.884154	0.3883
INT(-1)	-0.005716	0.047341	-0.120733	0.9052
INT(-2)	-0.053464	0.051358	-1.041012	0.3117
INT(-3)	-0.091549	0.051839	-1.766019	0.0943
LNEXR	-8.015292	1.753069	-4.572149	0.0002
LNEXR(-1)	7.692731	1.662184	4.628087	0.0002
LNINF	-2.936566	0.778768	-3.770787	0.0014
LNINF(-1)	4.510721	1.067109	4.227049	0.0005
LNINF(-2)	-4.867365	1.145868	-4.247754	0.0005
LNINF(-3)	-2.262307	1.300032	-1.740193	0.0989
LNINF(-4)	3.227354	0.881233	3.662318	0.0018
C	12.34712	5.300566	2.329396	0.0317

R-squared	0.910691	Mean dependent var	4.173925
Adjusted R-squared	0.811458	S.D. dependent var	3.767914
S.E. of regression	1.636083	Akaike info criterion	4.126220
Sum squared resid	48.18179	Schwarz criterion	5.021984
Log likelihood	-59.46128	Hannan-Quinn criter.	4.447612
F-statistic	9.177320	Durbin-Watson stat	2.142998
Prob(F-statistic)	0.000008		

Source: Author's computation using E-views (2025).

The ARDL model, estimated for GDP growth rate (GDPGR) as the dependent variable from 1985 to 2023 with 39 adjusted observations, was selected using the Akaike Information Criterion (AIC) with a lag structure of ARDL(4, 4, 3, 1, 4). The explanatory variables include foreign direct investment (FDI), interest rate (INT),

exchange rate (LNEXR), and inflation (LNINF), along with their respective lags and the constant term.

The results indicate that lagged GDP growth terms exhibit mixed short-run effects. GDPGR(-1) and GDPGR(-2) are positive and statistically significant (0.322, p=0.011; 0.484, p=0.001), suggesting persistence in growth, while GDPGR(-4) is negative and marginally significant (-0.185, p=0.069), reflecting short-term adjustments. FDI demonstrates dynamic impacts across lags, with the contemporaneous coefficient negative and significant (-1.571, p=0.017), indicating that current increases in FDI reduce GDP growth in the short run, while some lagged effects are positive (FDI(-2) = 2.242, p=0.001) and others negative (FDI(-4) = -2.797, p<0.001), highlighting complex short-term adjustments. Interest rate (INT) has limited short-run influence, as most coefficients are statistically insignificant, indicating a minimal immediate impact on GDP growth. Exchange rate (LNEXR) has significant but alternating effects; the contemporaneous effect is negative and significant (-8.015, p<0.001), while the first lag is positive and significant (7.693, p<0.001), reflecting short-term volatility in GDP response to currency fluctuations. Inflation (LNINF) shows both negative and positive effects across lags (e.g., D(LNINF) = -2.937, p=0.0014; D(LNINF(-1)) = 4.511, p<0.001), suggesting complex interactions with GDP in the short run. The constant term is positive and significant (12.347, p=0.032), representing the baseline level of GDP growth when all regressors are held constant.

The diagnostic statistics support the robustness of the model. The R-squared of 0.911 indicates that approximately 91.1% of the variation in GDP growth is explained by the explanatory variables and their lags, while the adjusted R-squared of 0.811 confirms strong explanatory power after accounting for degrees of freedom. The F-statistic of 9.177 ($p<0.001$) shows that the independent variables are jointly significant in explaining GDP growth. The Durbin-Watson statistic of 2.143 indicates no evidence of autocorrelation in the residuals, supporting the reliability of the estimates.

Overall, the results suggest that FDI, exchange rate, and inflation are key determinants of short-run GDP growth dynamics in Nigeria, with interest rate exerting a comparatively smaller influence. The findings highlight both significant short-run adjustments and the persistence of economic growth over time.

4.8 Post-Estimation Assessments

Assessing a model after estimation is an essential part of econometric analysis, as it helps confirm the validity and reliability of the results. Post-estimation diagnostics are conducted to ensure that the model meets the fundamental assumptions necessary for accurate statistical inference and dependable forecasting. In this study, two key post-estimation tests are considered:

4.8.1 Heteroskedasticity Test

This test evaluates whether the error terms have constant variance (homoskedasticity) or if the variance varies across observations. The presence of

heteroskedasticity can lead to inefficient estimates and compromise the reliability of hypothesis tests. For this study, the Breusch-Pagan-Godfrey test is employed to detect heteroskedasticity.

Table 4.7: Breusch-Pagan-Godfrey Heteroscedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.019541	Prob. F(16,11)	0.5001
Obs*R-squared	16.72317	Prob. Chi-Square(16)	0.4037
Scaled explained SS	3.699168	Prob. Chi-Square(16)	0.9993

Source: Author's computation using E-views (2025).

e Breusch-Pagan-Godfrey test was conducted to examine whether the variance of the error terms is constant (homoskedastic) or varies across observations (heteroskedastic). The F-statistic is 1.020 with a p-value of 0.500, the Obs*R-squared statistic is 16.723 with a p-value of 0.404, and the Scaled explained SS statistic is 3.699 with a p-value of 0.999. Since all the p-values are greater than the 5% significance level, we fail to reject the null hypothesis of homoskedasticity. This indicates that the model's residuals have constant variance, suggesting that heteroskedasticity is not a concern and that the coefficient estimates are efficient and reliable.

4.8.2 Autocorrelation Test

This test examines whether the residuals from the estimated model exhibit serial correlation. The presence of autocorrelation indicates that the model may have omitted important dynamic relationships, potentially leading to biased standard errors

and reducing the reliability of statistical inferences. To detect this issue, the study employs the Breusch-Godfrey Serial Correlation LM Test.

Table 4.8: Breusch-Godfrey Autocorrelation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.189753	Prob. F(2,16)	0.8290
Obs*R-squared	0.903613	Prob. Chi-Square(2)	0.6365

Source: Author's computation using E-views (2025).

The Breusch-Godfrey Serial Correlation LM Test was conducted to check for the presence of autocorrelation in the model's residuals. The F-statistic is 0.190 with a p-value of 0.829, and the Obs*R-squared statistic is 0.904 with a p-value of 0.637. Since both p-values are well above the 5% significance level, we fail to reject the null hypothesis of no serial correlation. This indicates that the residuals are not serially correlated, suggesting that the model adequately captures the dynamics in the data and that the standard errors of the coefficients are reliable for statistical inference.

4.9 Possible Policy Implications of Findings

The findings of this study provide valuable insights for policymakers in Nigeria on the role of foreign direct investment (FDI) and other macroeconomic variables in shaping economic growth. Several key policy implications emerge from the results.

First, the significant short-run and long-run effects of foreign direct investment (FDI) on GDP growth highlight the importance of attracting and managing productive

investment inflows. While some lags of FDI positively impact growth, others have negative effects, suggesting that policymakers should ensure that investment inflows are efficiently channeled into sectors that stimulate sustainable economic growth. This underscores the need for policies that improve the investment climate, enhance regulatory frameworks, and encourage productive private sector engagement.

Second, the negative and significant impact of exchange rate depreciation on GDP growth in the short run indicates that currency instability can hinder economic performance. Policymakers should therefore prioritize exchange rate stability through prudent monetary and fiscal measures, as well as by promoting export diversification and reducing reliance on imported goods, to shield domestic output from adverse currency fluctuations.

Third, inflation exhibits significant but mixed short-run effects on GDP growth, suggesting that rising prices can disrupt economic activities and reduce growth momentum. This finding highlights the importance of maintaining price stability through effective inflation-targeting policies, improved supply chain management, and structural reforms aimed at enhancing production efficiency.

Fourth, interest rate appears to have a limited immediate impact on GDP growth, indicating that excessively tight or restrictive monetary conditions may not substantially stimulate or restrain short-run growth. This calls for a balanced monetary policy approach that supports investment and output growth without triggering inflationary pressures.

Finally, the confirmed long-run equilibrium relationship among GDP growth, FDI, interest rate, exchange rate, and inflation underscores the need for coordinated macroeconomic policies. Fragmented or inconsistent interventions could undermine growth objectives, while coherent monetary, fiscal, and structural measures can promote sustainable economic development and resilience in the Nigerian economy.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Summary of Findings

This study examined the impact of foreign direct investment (FDI) on economic growth in Nigeria over the period 1985 to 2023 using the Autoregressive Distributed Lag (ARDL) approach. GDP growth rate (GDPGR) was used as the dependent variable, while FDI, interest rate (INT), exchange rate (LNEXR), and inflation (LNINF) served as explanatory variables, with a constant term included.

The unit root tests showed that all variables were integrated of order I(1), justifying the use of the ARDL bounds testing approach. The ARDL bounds test confirmed the existence of a long-run co-integration relationship between GDP growth and the selected macroeconomic variables.

In the long run, the coefficient estimates suggest that FDI, exchange rate, interest rate, and inflation all have negative effects on GDP growth, although none were statistically significant. This indicates that while these variables influence growth, their long-term impacts may be moderated by other structural and policy factors in the economy.

In the short run, FDI exhibited dynamic effects, with some lags positively affecting GDP growth and others negatively influencing it, reflecting complex adjustments in the economy to investment inflows over time. Exchange rate depreciation had a significant negative impact on GDP growth in the current period,

while its lagged effect was positive, highlighting short-term volatility. Inflation showed significant but alternating short-run effects, indicating that rising prices can both constrain and stimulate growth depending on timing and economic conditions. Interest rate, by contrast, had limited short-run influence, as most lag coefficients were insignificant. The constant term was positive and significant, pointing to other structural drivers of economic growth beyond the selected macroeconomic variables.

The model diagnostics indicate robustness of the estimated ARDL model. The R-squared of 0.911 and adjusted R-squared of 0.811 suggest that a substantial portion of GDP growth variations is explained by the regressors and their lags. The F-statistic (9.177, $p < 0.001$) confirms the joint significance of the explanatory variables, while the Durbin-Watson statistic (2.143) indicates no evidence of autocorrelation. Heteroskedasticity and serial correlation tests further confirmed the reliability of the model, supporting the validity of the empirical results.

5.2 Conclusion

The findings of this study establish that FDI has both short-run and dynamic effects on economic growth in Nigeria. While certain investment inflows positively stimulate growth, others can have negative short-term impacts, emphasizing the need for efficient channeling of foreign capital into productive sectors. Exchange rate instability and inflation remain critical constraints on growth, with depreciation and rising prices capable of undermining economic performance. Interest rate adjustments

appear to have limited direct influence on short-run growth, suggesting that monetary conditions alone are insufficient to drive GDP expansion.

Overall, the study concludes that sustainable economic growth in Nigeria requires a combination of effective management of FDI inflows, exchange rate stability, inflation control, and supportive structural reforms. Coordinated policy measures and stable macroeconomic conditions are essential to maximize the growth-enhancing potential of foreign investments.

5.3 Recommendations

Based on the empirical findings, the following policy recommendations are proposed:

1. **Promote productive FDI inflows:** Policymakers should focus on attracting foreign investments into sectors with high growth potential, such as manufacturing, infrastructure, and technology, to ensure that FDI translates into tangible economic expansion.
2. **Enhance exchange rate stability:** Given the significant short-run impact of exchange rate fluctuations, policies that stabilize the naira, reduce excessive volatility, and diversify export earnings can help safeguard economic growth.
3. **Control inflation effectively:** Inflation's alternating short-run effects highlight the importance of price stability. Measures such as efficient food and energy supply chains, prudent fiscal policies, and productivity-enhancing interventions are needed to mitigate inflationary pressures.

4. **Maintain balanced interest rate policies:** Although interest rates had limited direct effects on GDP growth, excessively high rates can constrain investment. The Central Bank of Nigeria should adopt interest rate policies that encourage productive investments while ensuring macroeconomic stability.
5. **Coordinate macroeconomic policies:** The long-run co-integration among GDP growth, FDI, exchange rate, inflation, and interest rate underscores the importance of harmonizing fiscal, monetary, and structural policies to achieve sustainable growth.
6. **Focus on structural reforms:** Beyond macroeconomic variables, investments in infrastructure, industrial capacity, and human capital are critical to maximizing the growth potential of FDI and supporting long-term economic development.
7. **Ensure policy credibility and stability:** Transparent, consistent, and predictable policy frameworks will strengthen investor confidence, promote private sector participation, and enhance the positive impact of FDI on economic growth.

In conclusion, effective management of FDI, combined with sound macroeconomic policies and structural reforms, provides Nigeria with the best pathway to achieving sustained and inclusive economic growth.

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APPENDIX

APPENDIX 1
DESCRIPTIVE STATISTICS

	GDPGR	FDI	INT	LNEXR	LNINF
Mean	3.042141	1.221217	0.482534	3.720765	2.698675
Median	3.251681	1.069539	3.023542	4.775475	2.565486
Maximum	15.32916	4.282088	18.18000	6.469551	4.288204
Minimum	-13.12788	-0.039127	-65.85715	-0.481739	1.684176
Std. Dev.	5.255826	0.945836	13.91620	2.040611	0.665429
Skewness	-0.839215	0.946879	-2.788874	-0.806039	0.810991
Kurtosis	4.845801	3.760779	13.56168	2.446974	2.949759
Jarque-Bera	11.15153	7.462483	255.6000	5.204140	4.718082
Probability	0.003789	0.023963	0.000000	0.074120	0.094511
Sum	130.8121	52.51234	20.74898	159.9929	116.0430
Sum Sq. Dev.	1160.196	37.57341	8133.748	174.8919	18.59742
Observations	43	43	43	43	43

APPENDIX 2
CORRELATION STATISTICS

	GDPGR	FDI	INT	LNEXR	LNINF
GDPGR	1	0.435215946843853 8	0.370582905466626 4	0.229537903956508 6	-0.254454847478103 3
FDI	0.435215946843853 8	1	-0.018272425249169 43	0.051344004832376 92	0.007701600724856539
INT	0.370582905466626 4	-0.018272425249169 43	1	0.396405919661733 5	-0.551041981274539 5
LNEXR	0.229537903956508 6	0.051344004832376 92	0.396405919661733 5	1	-0.024614919963757 17
LNINF	-0.254454847478103 3	0.007701600724856539	-0.551041981274539 5	-0.024614919963757 17	1

APPENDIX 3
UNIT ROOT TEST/ STATIONARY TESTS
AT LEVELS
FDI

Null Hypothesis: FDI has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.821361	0.0055
Test critical values:	1% level	-3.596616	
	5% level	-2.933158	
	10% level	-2.604867	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(FDI)
Method: Least Squares
Date: 09/03/25 Time: 04:07
Sample (adjusted): 1982 2023
Included observations: 42 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)	-0.530761	0.138893	-3.821361	0.0005
C	0.661506	0.215852	3.064632	0.0039

R-squared	0.267437	Mean dependent var	0.004403
Adjusted R-squared	0.249123	S.D. dependent var	0.975803
S.E. of regression	0.845564	Akaike info criterion	2.548823
Sum squared resid	28.59916	Schwarz criterion	2.631569
Log likelihood	-51.52528	Hannan-Quinn criter.	2.579153
F-statistic	14.60280	Durbin-Watson stat	2.234666
Prob(F-statistic)	0.000454		

GDPGR

Null Hypothesis: GDPGR has a unit root
Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.244560	0.0244
Test critical values:	1% level	-3.600987	
	5% level	-2.935001	
	10% level	-2.605836	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDPGR)
Method: Least Squares
Date: 08/26/25 Time: 19:27
Sample (adjusted): 1983 2023
Included observations: 41 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPGR(-1)	-0.426508	0.131453	-3.244560	0.0025
D(GDPGR(-1))	-0.321161	0.131667	-2.439190	0.0195
C	1.831602	0.721834	2.537428	0.0154

R-squared	0.397245	Mean dependent var	0.235698
Adjusted R-squared	0.365521	S.D. dependent var	4.619780
S.E. of regression	3.679850	Akaike info criterion	5.513976
Sum squared resid	514.5691	Schwarz criterion	5.639360
Log likelihood	-110.0365	Hannan-Quinn criter.	5.559634
F-statistic	12.52190	Durbin-Watson stat	1.912770
Prob(F-statistic)	0.000066		

INT

Null Hypothesis: INT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.670572	0.0000
Test critical values:	1% level	-3.596616	

	5% level	-2.933158
	10% level	-2.604867

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INT)
Method: Least Squares
Date: 08/26/25 Time: 19:28
Sample (adjusted): 1982 2023
Included observations: 42 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MPR(-1)	-0.752230	0.098067	-7.670572	0.0000
C	1.946921	1.365433	1.425863	0.1617

R-squared	0.595296	Mean dependent var	1.597386
Adjusted R-squared	0.585178	S.D. dependent var	13.73164
S.E. of regression	8.844089	Akaike info criterion	7.243824
Sum squared resid	3128.716	Schwarz criterion	7.326570
Log likelihood	-150.1203	Hannan-Quinn criter.	7.274153
F-statistic	58.83767	Durbin-Watson stat	1.667344
Prob(F-statistic)	0.000000		

LNEXR

Null Hypothesis: LNEXR has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.933317	0.3144
Test critical values:	1% level	-3.596616	
	5% level	-2.933158	
	10% level	-2.604867	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNEXR)
Method: Least Squares
Date: 08/26/25 Time: 19:29
Sample (adjusted): 1982 2023
Included observations: 42 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNEXR(-1)	-0.040583	0.020991	-1.933317	0.0603
C	0.313849	0.087413	3.590409	0.0009

R-squared	0.085457	Mean dependent var	0.165507
Adjusted R-squared	0.062594	S.D. dependent var	0.280307
S.E. of regression	0.271393	Akaike info criterion	0.275948
Sum squared resid	2.946160	Schwarz criterion	0.358694
Log likelihood	-3.794908	Hannan-Quinn criter.	0.306278
F-statistic	3.737716	Durbin-Watson stat	1.840535
Prob(F-statistic)	0.060297		

LNINF

Null Hypothesis: LNINF has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.520907	0.0122
Test critical values:	1% level	-3.596616	
	5% level	-2.933158	
	10% level	-2.604867	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNINF)
Method: Least Squares
Date: 08/26/25 Time: 19:30
Sample (adjusted): 1982 2023
Included observations: 42 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNINF(-1)	-0.477149	0.135519	-3.520907	0.0011
C	1.285955	0.374936	3.429803	0.0014

R-squared	0.236594	Mean dependent var	0.004038
Adjusted R-squared	0.217509	S.D. dependent var	0.655991
S.E. of regression	0.580280	Akaike info criterion	1.795835
Sum squared resid	13.46898	Schwarz criterion	1.878581
Log likelihood	-35.71254	Hannan-Quinn criter.	1.826165
F-statistic	12.39679	Durbin-Watson stat	1.577457
Prob(F-statistic)	0.001090		

APPENDIX 4
UNIT ROOT TEST/ STATIONARY TESTS
AT FIRST DIFFERENCE
FDI

Null Hypothesis: D(FDI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.08373	0.0000
Test critical values:	1% level	-3.600987	
	5% level	-2.935001	
	10% level	-2.605836	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(FDI,2)
Method: Least Squares
Date: 09/03/25 Time: 04:07
Sample (adjusted): 1983 2023
Included observations: 41 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.

D(FDI(-1))	-1.449523	0.143749	-10.08373	0.0000
C	0.001152	0.139720	0.008243	0.9935

R-squared	0.722778	Mean dependent var	0.014192
Adjusted R-squared	0.715670	S.D. dependent var	1.677722
S.E. of regression	0.894606	Akaike info criterion	2.662683
Sum squared resid	31.21244	Schwarz criterion	2.746272
Log likelihood	-52.58500	Hannan-Quinn criter.	2.693121
F-statistic	101.6815	Durbin-Watson stat	2.137657
Prob(F-statistic)	0.000000		

GDPGR

Null Hypothesis: D(GDPGR) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.68051	0.0000
Test critical values:	1% level	-3.600987	
	5% level	-2.935001	
	10% level	-2.605836	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDPGR,2)
Method: Least Squares
Date: 08/26/25 Time: 19:28
Sample (adjusted): 1983 2023
Included observations: 41 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR(-1))	-1.470159	0.137649	-10.68051	0.0000
C	0.423527	0.643414	0.658250	0.5142

R-squared	0.745220	Mean dependent var	-0.163804
Adjusted R-squared	0.738687	S.D. dependent var	8.029899

S.E. of regression	4.104783	Akaike info criterion	5.709734
Sum squared resid	657.1206	Schwarz criterion	5.793322
Log likelihood	-115.0495	Hannan-Quinn criter.	5.740172
F-statistic	114.0734	Durbin-Watson stat	1.965085
Prob(F-statistic)	0.000000		

INT

Null Hypothesis: D(INT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.35630	0.0000
Test critical values:	1% level	-3.600987	
	5% level	-2.935001	
	10% level	-2.605836	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INT,2)
Method: Least Squares
Date: 08/26/25 Time: 19:28
Sample (adjusted): 1983 2023
Included observations: 41 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INT(-1))	-1.171342	0.113104	-10.35630	0.0000
C	0.420996	1.563825	0.269209	0.7892

R-squared	0.733339	Mean dependent var	-1.486760
Adjusted R-squared	0.726501	S.D. dependent var	19.01377
S.E. of regression	9.943653	Akaike info criterion	7.479297
Sum squared resid	3856.173	Schwarz criterion	7.562885
Log likelihood	-151.3256	Hannan-Quinn criter.	7.509735
F-statistic	107.2530	Durbin-Watson stat	2.183712
Prob(F-statistic)	0.000000		

LNEXR

Null Hypothesis: D(LNEXR) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.503097	0.0000
Test critical values:	1% level	-3.600987	
	5% level	-2.935001	
	10% level	-2.605836	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNEXR,2)
Method: Least Squares
Date: 08/26/25 Time: 19:29
Sample (adjusted): 1983 2023
Included observations: 41 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNEXR(-1))	-0.883203	0.160492	-5.503097	0.0000
C	0.148816	0.051365	2.897253	0.0061

R-squared	0.437100	Mean dependent var	0.008018
Adjusted R-squared	0.422667	S.D. dependent var	0.375335
S.E. of regression	0.285189	Akaike info criterion	0.376220
Sum squared resid	3.171974	Schwarz criterion	0.459809
Log likelihood	-5.712513	Hannan-Quinn criter.	0.406659
F-statistic	30.28408	Durbin-Watson stat	1.978571
Prob(F-statistic)	0.000003		

LNINF

Null Hypothesis: D(LNINF) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*

Augmented Dickey-Fuller test statistic	-7.203706	0.0000
Test critical values: 1% level	-3.605593	
5% level	-2.936942	
10% level	-2.606857	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNINF,2)
Method: Least Squares
Date: 08/26/25 Time: 19:30
Sample (adjusted): 1984 2023
Included observations: 40 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNINF(-1))	-1.376093	0.191026	-7.203706	0.0000
D(LNINF(-1),2)	0.459460	0.133789	3.434222	0.0015
C	-0.002711	0.088695	-0.030560	0.9758

R-squared	0.604505	Mean dependent var	-0.020874
Adjusted R-squared	0.583127	S.D. dependent var	0.868259
S.E. of regression	0.560598	Akaike info criterion	1.752412
Sum squared resid	11.62798	Schwarz criterion	1.879078
Log likelihood	-32.04824	Hannan-Quinn criter.	1.798211
F-statistic	28.27681	Durbin-Watson stat	1.844091
Prob(F-statistic)	0.000000		

APPENDIX 5
ARDL MODEL ESTIMATE
RAW OUTPUT
Dependent Variable: GDPGR
Method: ARDL
Date: 09/03/25 Time: 04:12
Sample (adjusted): 1985 2023
Included observations: 39 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): FDI INT LNEXR LNINF

Fixed regressors: C
Number of models evalulated: 2500
Selected Model: ARDL(4, 4, 3, 1, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDPGR(-1)	0.322401	0.113943	2.829482	0.0111
GDPGR(-2)	0.483872	0.120860	4.003584	0.0008
GDPGR(-3)	-0.064983	0.114492	-0.567571	0.5773
GDPGR(-4)	-0.185121	0.095717	-1.934044	0.0690
FDI	-1.570871	0.595033	-2.639974	0.0166
FDI(-1)	0.892143	0.515794	1.729650	0.1008
FDI(-2)	2.242460	0.543018	4.129625	0.0006
FDI(-3)	0.203086	0.456629	0.444750	0.6618
FDI(-4)	-2.797123	0.428142	-6.533159	0.0000
INT	0.045222	0.051148	0.884154	0.3883
INT(-1)	-0.005716	0.047341	-0.120733	0.9052
INT(-2)	-0.053464	0.051358	-1.041012	0.3117
INT(-3)	-0.091549	0.051839	-1.766019	0.0943
LNEXR	-8.015292	1.753069	-4.572149	0.0002
LNEXR(-1)	7.692731	1.662184	4.628087	0.0002
LNINF	-2.936566	0.778768	-3.770787	0.0014
LNINF(-1)	4.510721	1.067109	4.227049	0.0005
LNINF(-2)	-4.867365	1.145868	-4.247754	0.0005
LNINF(-3)	-2.262307	1.300032	-1.740193	0.0989
LNINF(-4)	3.227354	0.881233	3.662318	0.0018
C	12.34712	5.300566	2.329396	0.0317

R-squared	0.910691	Mean dependent var	4.173925
Adjusted R-squared	0.811458	S.D. dependent var	3.767914
S.E. of regression	1.636083	Akaike info criterion	4.126220
Sum squared resid	48.18179	Schwarz criterion	5.021984
Log likelihood	-59.46128	Hannan-Quinn criter.	4.447612
F-statistic	9.177320	Durbin-Watson stat	2.142998
Prob(F-statistic)	0.000008		

*Note: p-values and any subsequent tests do not account for model selection.

APPENDIX 6
ARDL BOUND CO-INTEGRATION TEST

ARDL Bounds Test
Date: 09/03/25 Time: 04:13
Sample: 1985 2023
Included observations: 39
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	11.41107	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Test Equation:
Dependent Variable: D(GDPGR)
Method: Least Squares
Date: 09/03/25 Time: 04:13
Sample: 1985 2023
Included observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR(-1))	-0.233768	0.174224	-1.341769	0.1964
D(GDPGR(-2))	0.250104	0.140237	1.783444	0.0914
D(GDPGR(-3))	0.185121	0.095717	1.934044	0.0690
D(FDI)	-1.570871	0.595033	-2.639974	0.0166
D(FDI(-1))	0.351578	0.653384	0.538088	0.5971
D(FDI(-2))	2.594037	0.601871	4.309955	0.0004
D(FDI(-3))	2.797123	0.428142	6.533159	0.0000
D(INT)	0.045222	0.051148	0.884154	0.3883
D(INT(-1))	0.145013	0.080566	1.799943	0.0887
D(INT(-2))	0.091549	0.051839	1.766019	0.0943

D(LNEXR)	-8.015292	1.753069	-4.572149	0.0002
D(LNINF)	-2.936566	0.778768	-3.770787	0.0014
D(LNINF(-1))	3.902318	1.334770	2.923589	0.0091
D(LNINF(-2))	-0.965047	1.232941	-0.782719	0.4440
D(LNINF(-3))	-3.227354	0.881233	-3.662318	0.0018
C	12.34712	5.300566	2.329396	0.0317
FDI(-1)	-1.030306	0.948694	-1.086026	0.2918
INT(-1)	-0.105507	0.128733	-0.819575	0.4232
LNEXR(-1)	-0.322561	0.293158	-1.100298	0.2857
LNINF(-1)	-2.328164	1.797680	-1.295093	0.2117
GDPGR(-1)	-0.443831	0.203364	-2.182445	0.0426

R-squared	0.935098	Mean dependent var	0.101945
Adjusted R-squared	0.862985	S.D. dependent var	4.419993
S.E. of regression	1.636083	Akaike info criterion	4.126220
Sum squared resid	48.18179	Schwarz criterion	5.021984
Log likelihood	-59.46128	Hannan-Quinn criter.	4.447612
F-statistic	12.96713	Durbin-Watson stat	2.142998
Prob(F-statistic)	0.000001		

APPENDIX 7

ARDL BOUND TEST

LONG AND SHORT RUN

ARDL Cointegrating And Long Run Form
Dependent Variable: GDPGR
Selected Model: ARDL(4, 4, 3, 1, 4)
Date: 09/03/25 Time: 04:13
Sample: 1981 2023
Included observations: 39

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR(-1))	-0.233768	0.174224	-1.341769	0.1964
D(GDPGR(-2))	0.250104	0.140237	1.783444	0.0914
D(GDPGR(-3))	0.185121	0.095717	1.934044	0.0690
D(FDI)	-1.570871	0.595033	-2.639974	0.0166

D(FDI(-1))	-2.242460	0.543018	-4.129625	0.0006
D(FDI(-2))	-0.203086	0.456629	-0.444750	0.6618
D(FDI(-3))	2.797123	0.428142	6.533159	0.0000
D(INT)	0.045222	0.051148	0.884154	0.3883
D(INT(-1))	0.053464	0.051358	1.041012	0.3117
D(INT(-2))	0.091549	0.051839	1.766019	0.0943
D(LNEXR)	-8.015292	1.753069	-4.572149	0.0002
D(LNINF)	-2.936566	0.778768	-3.770787	0.0014
D(LNINF(-1))	4.867365	1.145868	4.247754	0.0005
D(LNINF(-2))	2.262307	1.300032	1.740193	0.0989
D(LNINF(-3))	-3.227354	0.881233	-3.662318	0.0018
CointEq(-1)	-0.443831	0.203364	-2.182445	0.0426

Cointeq = GDPGR - (-2.3214*FDI -0.2377*INT -0.7268*LNEXR -5.2456
*LNINF + 27.8194)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	-2.321393	3.107864	-0.746942	0.4647
INT	-0.237718	0.345296	-0.688448	0.4999
LNEXR	-0.726766	0.858374	-0.846678	0.4083
LNINF	-5.245609	5.160857	-1.016422	0.3229
C	27.819412	20.565845	1.352700	0.1929

APPENDIX 8
DIAGNOSTIC TEST
BREUSCH-GODFREY AUTOCORRELATION

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.189753	Prob. F(2,16)	0.8290
Obs*R-squared	0.903613	Prob. Chi-Square(2)	0.6365

Test Equation:
Dependent Variable: RESID
Method: ARDL
Date: 09/03/25 Time: 04:15

Sample: 1985 2023
Included observations: 39
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPGR(-1)	0.039721	0.135748	0.292608	0.7736
GDPGR(-2)	-0.008681	0.135853	-0.063902	0.9498
GDPGR(-3)	-0.008695	0.121388	-0.071632	0.9438
GDPGR(-4)	0.010356	0.102388	0.101146	0.9207
FDI	-0.026101	0.625879	-0.041703	0.9673
FDI(-1)	0.025371	0.543560	0.046676	0.9633
FDI(-2)	-0.014619	0.569785	-0.025658	0.9798
FDI(-3)	-0.052294	0.486153	-0.107568	0.9157
FDI(-4)	-0.016805	0.449882	-0.037354	0.9707
INT	-0.006870	0.055085	-0.124712	0.9023
INT(-1)	0.000118	0.050920	0.002310	0.9982
INT(-2)	0.003492	0.054346	0.064263	0.9496
INT(-3)	0.003722	0.054760	0.067972	0.9467
LNEXR	-0.245398	1.881394	-0.130434	0.8978
LNEXR(-1)	0.211673	1.776453	0.119155	0.9066
LNINF	-0.171952	0.863458	-0.199143	0.8447
LNINF(-1)	0.187106	1.189122	0.157348	0.8769
LNINF(-2)	-0.183396	1.258685	-0.145704	0.8860
LNINF(-3)	0.122330	1.405739	0.087022	0.9317
LNINF(-4)	0.076098	0.935901	0.081309	0.9362
C	0.068031	5.588222	0.012174	0.9904
RESID(-1)	-0.193238	0.314748	-0.613945	0.5479
RESID(-2)	0.001196	0.307973	0.003885	0.9969

R-squared	0.023170	Mean dependent var	-7.52E-16
Adjusted R-squared	-1.319972	S.D. dependent var	1.126029
S.E. of regression	1.715106	Akaike info criterion	4.205342
Sum squared resid	47.06544	Schwarz criterion	5.186416
Log likelihood	-59.00416	Hannan-Quinn criter.	4.557343
F-statistic	0.017250	Durbin-Watson stat	1.909070
Prob(F-statistic)	1.000000		

APPENDIX 9
BREUSCH-PAGAN-GODFREY HETEROSCEDASTICITY

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.434577	Prob. F(20,18)	0.9630
Obs*R-squared	12.69954	Prob. Chi-Square(20)	0.8899
Scaled explained SS	7.084148	Prob. Chi-Square(20)	0.9964

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 09/03/25 Time: 04:15
Sample: 1985 2023
Included observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.043283	11.07230	-0.365171	0.7192
GDPGR(-1)	-0.104348	0.238015	-0.438410	0.6663
GDPGR(-2)	0.029582	0.252463	0.117172	0.9080
GDPGR(-3)	0.034149	0.239162	0.142784	0.8880
GDPGR(-4)	-0.200043	0.199943	-1.000502	0.3303
FDI	0.238814	1.242958	0.192133	0.8498
FDI(-1)	-0.380670	1.077436	-0.353311	0.7280
FDI(-2)	-0.658832	1.134304	-0.580825	0.5686
FDI(-3)	0.142259	0.953847	0.149142	0.8831
FDI(-4)	0.361620	0.894342	0.404342	0.6907
INT	0.039663	0.106842	0.371227	0.7148
INT(-1)	0.014998	0.098890	0.151666	0.8811
INT(-2)	-0.020065	0.107281	-0.187030	0.8537
INT(-3)	0.051644	0.108287	0.476917	0.6392
LNEXR	1.552450	3.661967	0.423939	0.6766
LNEXR(-1)	-0.652678	3.472118	-0.187977	0.8530
LNINF	1.194892	1.626759	0.734523	0.4721
LNINF(-1)	-0.684670	2.229072	-0.307155	0.7623
LNINF(-2)	0.694486	2.393591	0.290144	0.7750
LNINF(-3)	0.746123	2.715623	0.274752	0.7866
LNINF(-4)	-1.033660	1.840797	-0.561528	0.5814

R-squared	0.325629	Mean dependent var	1.235430

Adjusted R-squared	-0.423672	S.D. dependent var	2.864282
S.E. of regression	3.417595	Akaike info criterion	5.599485
Sum squared resid	210.2392	Schwarz criterion	6.495249
Log likelihood	-88.18995	Hannan-Quinn criter.	5.920877
F-statistic	0.434577	Durbin-Watson stat	2.630194
Prob(F-statistic)	0.962957		

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