THE RELATIVE IMPACT OF REMITTANCES AND FOREIGN DIRECT INVESTMENT ON NIGERIA'S ECONOMIC GROWTH

BY

IWETA EFE

MATRIC NUMBER

PG/SSC/2110519

DEPARTMENT OF ECONOMICS

FACULTY OF SOCIAL SCIENCES

UNIVERSITY OF BENIN

BENIN CITY

SEPTEMBER, 2025

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A PROJECT SUBMITTED TO THE DEPARTMENT OF ECONOMICS, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, NIGERIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS OF SCIENCE (MSC) DEGREE IN ECONOMICS.

SEPTEMBER, 2025

DECLARATION

I hereby declare that this project titled "THE RELATIVE IMPACT OF REMITTANCES AND FOREIGN DIRECT INVESTMENT ON NIGERIA'S ECONOMIC GROWTH", is as a result of my research carried out in the faculty of social sciences, University of Benin. This work has neither been submitted previously for the award of any degree nor is it currently under consideration for any other degree.

_____ _____

IWETA EFE **DATE**

CERTIFICATION

This is to certify that this project titled "THE RELATIVE IMPACT OF REMITTANCES AND FOREIGN DIRECT INVESTMENT ON NIGERIA'S ECONOMIC GROWTH" was carried undertaken by IWETA EFE in the Department of Economics, Faculty of Social Sciences, University of Benin, Nigeria.

_____ _____

Prof. H.E. Oaikhenan Date

_____ _____

Dr. F. Mogbolu Date
(Project Coordinator)

_____ _____

Dr. N.L. Arodoye Date
(Ag. Head of Department)

DEDICATION

This project is dedicated to my humble self, OMONAEFE, the journey wasn't easy, I came, I saw and I conquered. The victory is mine.

ACKNOWLEDGEMENT

My greatest gratitude goes to God almighty for making it possible to complete this programme.

Special appreciation goes to my supervisor, Prof. H.E. Oaikhenan whose patience, sound counsel, constructive criticism and encouragement brought this project into reality and also left indelible impression of competence, intelligence and capacity to this work.

My profound gratitude also goes to my families and friends for their financial assistance, love, prayers and advice all through my academic year. Especially my mum Mrs. Omamuyovwi Janet, my precious aunty Mrs. Odudu Ejiro, my sweet grandmum Mrs. Iwete Obadavusi, my cousins Mrs. Jennifer Peter, Mrs. Rukevwe Owen, Mrs. Franca Justin, Mrs. Williams Philomena, Miss. Okiemutie Eduruke, Mr. Saturday Agoba.

Also, my appreciation goes to the Head of Department, Dr. N.L. Arodoye for his unwavering leadership in the Department. To my project coordinator, Dr. Mrs. F. Mogbolu and other Acadmic Staff of the Department, Prof Sede I.P, Prof. Igbinedion, Prof. S.A Oyefusi, Prof C.A Ighodaro, Dr J.W Okweshine, Prof. D.E Oriakhi I want to say thank you for the knowledge impacted on me.

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To my friends and course mates, thank you for being there in this academic journey, I love you all.

TABLE OF CONTENTS

CHAPTER TWO: BACKGROUND TO THE STUDY

CHAPTER THREE: LITERATURE REVIEW

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

This study examines the relative impact of remittance and foreign direct investment on Nigeria economic growth for the period 1981-2023. Real gross domestic product growth (RGDPG) is taken as proxy for Nigeria's Economic growth. The study utilizes the Auto-regressive Distributed Lag (ARDL) technique to investigate the relative impact of remittances and foreign direct investment on Nigeria's economic growth for both the short and long run term.

The long-run ARDL coefficient estimates reveal that remittances is the only variable with statistically significant positive effect on Nigeria's economic growth with a coefficient estimate of 0.3204 implying a unit rise in remittance leading to 0.32 percent increase in real GDP growth (RGDP). Conversely, FDI, gross capital formation (GCF) and exchange rate exhibited statistically insignificant long-run effects in the estimated model.

The result indicates that remittance have a strong and positive long-run influence on Nigeria's economic growth, suggesting that sustained in flows of remittances funds contribute significantly to the country's economic growth trajectory. Foreign directs investment (FDI), Gross Capital Formation (GFC) and exchange rate are statistically insignificant, suggesting that their long-term impacts on Nigeria's GDP growth are weak or unstable within the examined period. On the overall, policy makers are to ensure continuous improvement on remittances channels as a key driver of Nigeria's economic growth and tackle factors responsible for instability in FDI such as political instability, insecurity, insurgency, volatile business environment amongst others as both remittances and FDI are critical to the long-term Nigeria's economic growth process.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Nigeria, Africa's most populous nation and one of its biggest economies, continues to pursue sustainable economic growth amidst ongoing structural and macroeconomic challenges. Despite its considerable endowments in natural resources, a large domestic market, and a growing youth population, the Nigerian economy has struggled with underinvestment, infrastructure deficits, unemployment, exchange rate volatility, and a heavy reliance on crude oil exports. In an effort to address these challenges and stimulate more inclusive development, policymakers have increasingly focused on leveraging external funding sources, particularly Foreign Direct Investment (FDI) and diaspora remittances, as complementary drivers of economic transformation.

FDI and remittances have become critical components of Nigeria’s financial inflows. FDI is expected to support development by facilitating capital accumulation, technology transfer, job creation, and the expansion of productive capacity. Remittances, on the other hand, serve as an important non-debt-creating source of income that enhances household welfare, supports consumption, and finances small-scale entrepreneurial ventures. Together, these inflows can potentially contribute to economic growth by supplementing domestic savings and facilitating investments in important areas like infrastructure, education, healthcare, and housing.

According to World Bank estimates, Nigeria received approximately $20.1 billion in remittances in 2022, the highest in Sub-Saharan Africa. These remittance flows accounted for a noteworthy segment of the nation’s GDP and played a stabilizing role during periods of economic

uncertainty. By contrast, FDI inflows have been more volatile, affected by global market dynamics, oil price shocks, domestic policy inconsistencies, and rising insecurity. Despite their perceived potential to stimulate growth, the true effects of remittances and Foreign Direct Investment on Nigeria's economic performance remains contested within academic and policy circles.

The empirical literature provides divergent perspectives. For example, Adeleye, Ologunwa, and Ogunjobi (2021), using OLS analysis from 1980 to 2019, found a negative relationship between FDI and economic growth, but a positive and statistically significant impact of remittances. In contrast, Giwa, Oladeji, and Ajibola (2025) employed the Generalized Method of Moments (GMM) and found that FDI has a significantly boosts real GDP, particularly when complemented by high labor quality. Similarly, Kutu and Ohonba (2024), using ARDL methodology, demonstrated that both FDI and remittances positively influence GDP growth in the long run, emphasizing their complementary roles in enhancing economic performance.

Additional studies, such as those by Adekunle (2024) and Owotemu et al. (2024), underscore the importance of remittances in supporting household consumption, entrepreneurial activity, and infrastructure investment, with an estimated 87.5% of 2018's remittances directed toward construction and housing. However, other scholars, like Jelilov and Olasunkanmi (2021), argue that FDI's long-term impact on growth may be insignificant in the absence of enabling domestic policies and institutional capacity.

Given these mixed findings, it becomes evident that the connection between Nigeria's economic expansion and foreign capital inflows is complex and context-dependent. As such, there is a need for a more nuanced analysis that considers the macroeconomic environment, policy frameworks, and the absorptive capacity of the Nigerian economy. Therefore, this study aims to re-examine

how remittances and Foreign Direct Investment affect Nigeria's economic growth, with the aim of generating evidence-based insights that can guide more effective policy interventions and promote sustainable growth.

1.2 Statement of the Problem

Nigeria, the continent's most populated nation and one of Africa's biggest economies, has long depended on external capital inflows—particularly Foreign Direct Investment (FDI) and diaspora remittances in order to promote economic growth. These financial resources are expected to supplement domestic savings, enhance productive investment, support infrastructural development, and reduce poverty by increasing household income and employment opportunities.

Despite these expectations, Nigeria's economic growth has remained volatile and insufficient to address its widespread developmental challenges. Between 2010 and 2023, the country recorded erratic GDP growth rates—ranging from 8.2% in 2010 to a contraction of -1.6% in 2016, with modest recovery to around 2.3% in 2023 (World Bank, 2024; NBS, 2023). These fluctuations raise concerns about the efficacy of remittances and FDI in encouraging sustainable and inclusive growth.

Remittance inflows to Nigeria reached $20.1 billion in 2022, making it the largest recipient in Sub-Saharan Africa and contributing nearly 4% of national GDP (World Bank, 2023). In contrast, FDI has seen a consistent decline, from $8.84 billion in 2011 to just $1.06 billion in 2022, amid rising insecurity, foreign exchange volatility, and policy uncertainty (CBN, 2023; UNCTAD, 2023). While remittances are generally associated with improved household consumption, education financing, and small-scale investments, FDI is expected to foster technological

advancement, industrialization, and employment. Yet, their actual impact in the Nigerian context remains ambiguous.

Empirical literature reveals conflicting findings. Some studies argue that remittances significantly boost economic growth and welfare (Adekunle, 2024; Owotemu, Ifechi-Fred, & Faleti, 2024), while others suggest that the long-term contribution of FDI is limited due to sectoral concentration and lack of integration with the local economy (Adeleye, Ologunwa, & Ogunjobi, 2021; Jelilov & Olasunkanmi, 2021). Conversely, some recent studies highlight the potential of both inflows to positively affect growth if supported by enabling policies and institutional frameworks (Giwa, Oladeji, & Ajibola, 2025; Kutu & Ohonba, 2024).

This divergence in findings presents a significant knowledge gap. In the context of Nigeria's ongoing economic challenges—including a poverty rate exceeding 40%, youth unemployment above 35%, and an infrastructure financing shortfall of over $100 billion (AfDB, 2023)—it becomes imperative to critically assess the roles of FDI and remittances in driving growth. Without a clear understanding of their actual contributions and constraints, policymakers risk misallocating resources and missing opportunities to leverage these capital inflows for national development.

This research aims to reassess how foreign direct investment (FDI) and remittance inflows influence Nigeria's economic growth, with the purpose of generating fresh evidence that can guide the development of more efficient and focused economic policies.

1.3 Research Questions

1. What is the impact of Foreign Direct Investment on economic growth in Nigeria?
2. What is the impact of remittances on economic growth in Nigeria?

3. What are the combined effects of FDI and remittances on Nigeria's economic growth?

1.4 Objectives of the Study

The main purpose of this research is to analyze the effect of foreign direct investment (FDI) and remittances on Nigeria's economic growth. The study is further guided by the following specific objectives:

1. Assess the individual effect of FDI on Nigeria's economic growth.
2. Evaluate the individual effect of remittances on Nigeria's economic growth.
3. Analyze the joint impact of FDI and remittances on economic growth in Nigeria.

1.5 Hypotheses of the Study

The study is guided by the following null hypotheses:

1. Foreign Direct Investment has no significant effect on Nigeria's economic growth.
2. Remittances have no significant effect on Nigeria's economic growth.
3. The joint impact of FDI and remittances on Nigeria's economic growth is not significant.

1.6 Significance of the Study

This research is highly relevant to multiple stakeholders both within Nigeria and abroad. For policymakers and government authorities, it provides evidence-based insights that can aid in designing more efficient approaches to maximize the benefits of foreign capital inflows, especially Foreign Direct Investment (FDI) and remittances from the diaspora. Such insights are crucial for developing policies that not only enhance the attraction and regulation of these inflows but also ensure their allocation to productive areas of the economy. For investors and

financial institutions, the discoveries provide valuable information that can guide investment strategies and enhance mechanisms for remittance facilitation, thereby improving the efficiency and security of financial transactions.

In the academic and research community, the study makes a meaningful contribution to the ongoing exploration of the interplay between capital inflows and economic growth. By addressing inconsistencies in previous empirical findings and presenting a nuanced analysis of the Nigerian context, the study offers new perspectives and enriches the body of knowledge on development finance. Development partners and international donor agencies can also benefit from the study, as it sheds light on how external financial flows impact domestic economic performance. This understanding is critical in ensuring that aid and development finance are better aligned with national growth strategies and priorities.

Furthermore, the study supports the objectives of Sustainable Development Goal 17.3, which emphasizes the mobilization of additional financial resources for developing countries through international support. By evaluating the actual economic contributions of FDI and remittances, the study helps to assess how well Nigeria is leveraging these international financial flows in pursuit of sustainable development.

1.7 Scope of the Study

The scope of this research is limited to Nigeria, spanning the years 1981 to 2023. It investigates both the separate and joint impacts of Foreign Direct Investment (FDI) and remittance inflows on the nation's economic growth, measured by GDP growth rate. Econometric techniques such as ARDL, NARDL, and OLS will be applied to ensure robustness in both short-run and long-run analysis.

1.8 Organisation of the Study

This research is structured into six chapters to ensure clarity and logical progression. Chapter One introduces the study, presenting the background, problem statement, research questions, objectives, hypotheses, significance, scope, and overall organization. Chapter Two highlights fundamental issues related to the study's background. Chapter Three offers an extensive review of existing literature, including theoretical, conceptual, and empirical perspectives, while identifying relevant gaps that justify the research. Chapter Four outlines the research methodology, specifying data sources, model formulation, and analytical techniques used to evaluate the link between foreign capital inflows and economic growth. Chapter Five centers on data presentation and analysis, interpreting the results in relation to the study's objectives. Chapter Six concludes the work by summarizing major findings, drawing conclusions, and proposing policy recommendations to improve the effective utilization of foreign direct investment and remittances for sustainable economic growth in Nigeria.

CHAPTER TWO

BACKGROUND TO THE STUDY

2.1 Trend of Real Gross Domestic Product in Nigeria (1981–2023)

Real Gross Domestic Product (RGDP) refers to the overall value of all final goods and services generated in Nigeria's economy, expressed in constant prices to account for the effects of inflation. It serves as the primary indicator of the economy's size and performance. The trend in Nigeria's RGDP from 1981 to 2023, as presented in Figure 2.1, shows a general pattern of long-term growth, albeit with periods of stagnation and minor contractions.

Slow Growth and Structural Adjustment (1981–1990)

During the early 1980s, Nigeria's real GDP remained comparatively low and fluctuating, reflecting the effects of falling oil prices, macroeconomic instability, and poor fiscal management. RGDP fell from ₦275.64 billion in 1981 to ₦226.27 billion in 1984, before modestly recovering to ₦302.6 billion by 1990. The Structural Adjustment Programme (SAP) adoption in 1986 marked an effort to liberalize the economy and reduce dependence on oil. While the reforms spurred some growth, the benefits were uneven, as inflation, exchange rate devaluation, and social costs limited broad-based economic gains.

Moderate Expansion amid Political Transition (1991–1999)

From 1991 to 1999, the economy grew moderately, with RGDP increasing from ₦303.68 billion in 1991 to ₦337.99 billion in 1999. This period included significant political changes, including the end of military rule and the beginning of democratic governance in 1999. However,

economic expansion remained constrained by low levels of investment, weak infrastructure, and policy uncertainty.

Reform-Led Growth and Oil Boom (2000–2010)

The early 2000s saw a significant acceleration in economic output. RGDP rose from ₦354.94 billion in 2000 to ₦762.24 billion in 2010. This expansion was fuelled by:

- Rising global oil prices,
- Major financial sector and macroeconomic reforms,
- Nigeria's debt relief under the Paris Club,
- The growth of non-oil sectors like telecoms, banking, and services.

The increase in real output during this period indicated improved productivity and investment, although poverty and inequality remained persistent challenges.

GDP Rebasing and Structural Growth (2011–2015)

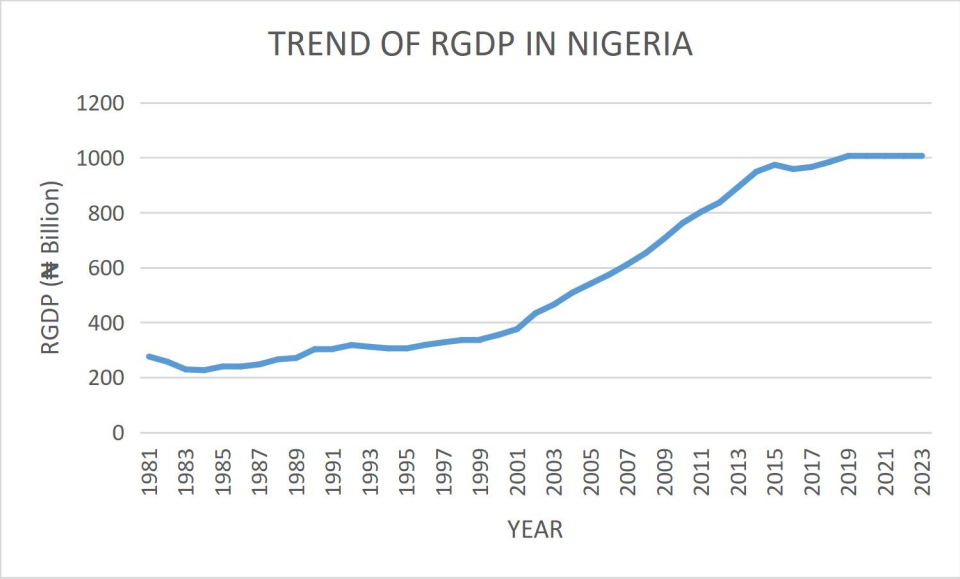
The period between 2011 and 2015 saw another leap in RGDP, from ₦802.7 billion in 2011 to ₦973.95 billion in 2015. The 2014 rebasing of Nigeria's GDP, which changed the base year from 1990 to 2010, was a major contributing element, capturing previously unaccounted sectors such as Nollywood and ICT. While this did not reflect new economic output, it provided a more accurate picture of the economy's composition and scale.

Recession, Recovery, and Stagnation (2016–2023)

From **2016 onward**, the pace of real GDP growth slowed, and by **2020**, it plateaued at **₦1,006.24 billion**, where it remained stagnant through to **2023**. The sharp fall in oil prices in

2016 pushed the economy into recession, and although there was a modest recovery, the **COVID-19 pandemic**, foreign exchange constraints, inflation, and insecurity contributed to an extended period of weak or flat growth.

Figure 2.1: Trend of Real Gross Domestic Product in Nigeria (1981–2023)



Source: Researcher's (2025) with the aid of EViews 10.0

The trend in Nigeria's real GDP over the past four decades demonstrates a structural transition from economic volatility in the 1980s and 1990s to more stable but still uneven growth in the 2000s and 2010s. The stagnation observed from 2020 to 2023 suggests that while the economy has expanded in size, structural bottlenecks, weak diversification, and external vulnerabilities continue to constrain long-term sustainable growth. This underlines the relevance of analyzing how external financial inflows like foreign direct investment and remittances have contributed (or failed to contribute) to Nigeria's economic development.

2.2 Trend of Foreign Direct Investment in Nigeria (1981–2023)

Foreign Direct Investment (FDI) is a key driver of economic development as it supplies capital, facilitates technology transfer, and creates job opportunities. In Nigeria, FDI has historically been concentrated in the oil and gas industry but has gradually diversified into areas such as telecommunications, manufacturing, and financial services in recent decades. **Figure 2.2** illustrates the pattern of FDI inflows between 1981 and 2023.

Low and Flat Investment Levels (1981–1990)

Between 1981 and 1990, FDI inflows into Nigeria remained extremely low, averaging less than ₦0.2 billion annually. The inflow stood at ₦0.11 billion in 1981, rising only slightly to ₦0.2 billion in 1990. This period coincided with declining oil prices, foreign exchange controls, and the pre-reform economic structure that deterred foreign investors. The business environment was largely unfavourable due to macroeconomic instability, excessive regulation, and political uncertainty.

Initial Rise Following Structural Reforms (1991–2000)

A notable jump in FDI occurred in 1991, when inflows surged to ₦7.7 billion, reflecting growing investor interest following the implementation of SAP and Nigeria's partial liberalization. Throughout the 1990s, FDI continued to grow modestly, reaching ₦10.56 billion by 2000. The improvement was aided by reforms that reduced government intervention in the economy, deregulated foreign exchange, and encouraged private sector participation. Nonetheless, the growth in FDI was still moderate, as political instability and weak institutional frameworks limited Nigeria’s attractiveness as a long-term investment destination.

FDI Boom and Sectoral Diversification (2001–2010)

From 2001 to 2010, FDI inflows increased significantly, particularly after 2001, when inflows rose to ₦60 billion and then continued climbing steadily. By 2010, FDI had reached ₦108 billion. This surge was driven by:

- **High global oil prices** and increased exploration in the Niger Delta,
- **Telecommunication sector liberalization**, which attracted major international players like MTN,
- **Banking sector reforms** and recapitalization,
- Greater macroeconomic stability under civilian democratic governance.

FDI during this period expanded beyond oil to include services, manufacturing, and infrastructure, reflecting growing investor confidence.

Sharp Spike and Subsequent Stabilization (2011–2015)

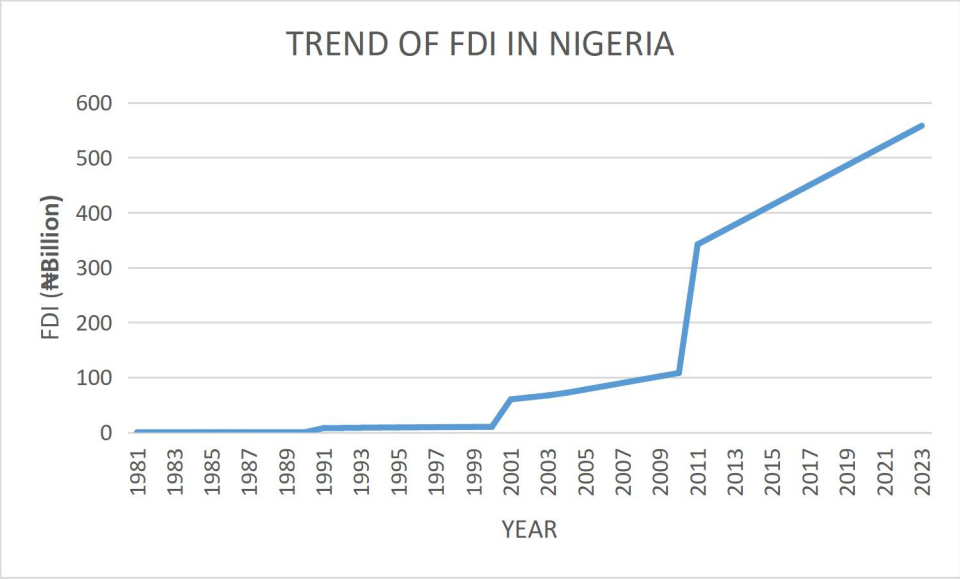
FDI inflows experienced a dramatic spike in 2011, jumping from ₦108 billion in 2010 to ₦342 billion, an over 200% increase. This may be attributed to major one-off investments, including privatization and large capital inflows in oil, telecoms, and construction. The period also coincided with Nigeria's GDP rebasing in 2014, which improved global perceptions of the market's size and potential. FDI continued its upward trajectory, reaching ₦414 billion by 2015.

Sustained Growth despite Economic Challenges (2016–2023)

Despite economic headwinds—such as recession in 2016, exchange rate volatility, and security concerns—FDI inflows continued to grow steadily from **₦432 billion in 2016** to **₦558 billion in 2023**. This may be attributed to continued interest in Nigeria’s consumer market, digital

economy, and resource sectors. Nevertheless, it is significant to note that while the **nominal value of FDI increased**, in real terms, its impact may have been diminished by inflation, currency depreciation, and low domestic productivity absorption.

Figure 2.2: Trend of Foreign Direct Investment in Nigeria (1981–2023)



Source: Researcher's (2025) with the aid of EViews 10.0

The trend in FDI inflows shows a marked transformation in Nigeria's investment climate. From negligible inflows in the 1980s, the country has grown into one of Africa's top FDI destinations by the 2000s. However, this growth has been **uneven and vulnerable to external shocks**, political instability, and policy reversals. While FDI has supported sectoral expansion and infrastructure development, its sustainability depends on Nigeria's ability to improve the investment climate, reduce security risks, ensure regulatory consistency, and expand beyond oil-related investments.

2.3 Trend of Remittance Inflows in Nigeria (1981–2023)

Remittances refer to monetary transfers made by Nigerians living abroad to individuals or households in the country. Over time, remittance inflows have emerged as a significant and stable source of external financing, often surpassing both foreign direct investment and official development assistance in size. The trend of remittance inflows to Nigeria from 1981 to 2023 is depicted in Figure 2.3.

Negligible Remittances in Early Years (1981–1990)

From 1981 to 1990, remittance inflows remained extremely low and insignificant to Nigeria's macroeconomic framework, ranging from ₦0.03 billion to ₦0.05 billion annually. This reflects limited Nigerian migration abroad at the time, as well as underdeveloped remittance channels. Additionally, the country lacked formal financial systems and policies to facilitate diaspora remittances during this period.

Gradual Uptick during Economic Liberalization (1991–2000)

A noticeable increase in remittance inflows began in 1991, rising sharply to ₦1.76 billion and continuing upward to ₦3.3 billion by 2000. This period coincided with:

- An increase in Nigerian emigration to Europe, North America, and other parts of Africa due to economic hardship and political instability,
- The growing use of informal channels for transfers,
- Initial reforms that began integrating remittances into the formal financial system.

The improvement in global connectivity and increased awareness among the Nigerian diaspora likely contributed to this modest but sustained rise.

Remittances as a Development Tool (2001–2010)

Between 2001 and 2010, remittance inflows expanded significantly, rising from ₦24 billion in 2001 to ₦78 billion in 2010. This period reflected:

- **Improved financial inclusion** and the expansion of formal remittance transfer systems (e.g., Western Union, MoneyGram),
- **Stable exchange rate policies** and increasing trust in local financial institutions,
- A growing diaspora population, many of whom attained middle- to high-income status abroad and were able to support relatives back home.

Remittances became increasingly vital as a counter-cyclical financial flow, helping households meet basic consumption, education, and healthcare needs—especially during periods of domestic economic hardship.

Exponential Surge in the 2010s (2011–2015)

A major shift occurred in 2011, when remittance inflows jumped threefold from ₦78 billion in 2010 to ₦252 billion. This exponential growth continued through 2015, with inflows reaching ₦324 billion. The following developments helped drive this surge:

- Enhanced tracking and reporting by the **Central Bank of Nigeria (CBN)**,
- **Diaspora engagement strategies**, such as the creation of the Nigerian Diaspora Commission.
- Broader access to digital money transfer platforms, reducing transfer costs and improving speed.

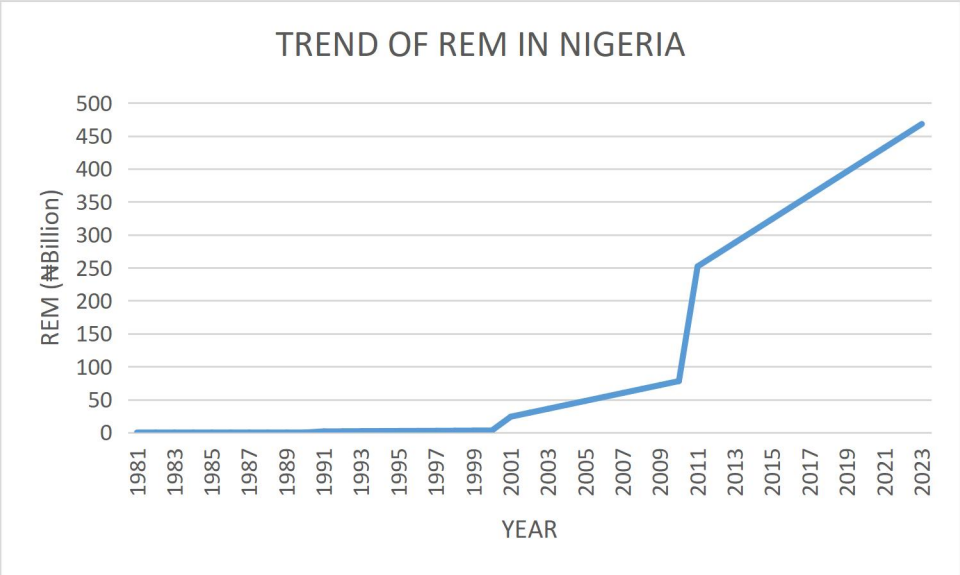
This surge underscored remittances' growing importance in Nigeria's external sector, with inflows increasingly rivalling, and in some years even surpassing, FDI.

Stabilization and Plateau (2016–2023)

From 2016 to 2023, remittance inflows continued to rise in nominal terms, reaching ₦468 billion in 2023. However, the pace of growth decelerated, indicating a stabilization or plateau. Several factors may explain this:

- **Global economic conditions**, such as inflation and recession in host countries (e.g., the US, UK),
- Domestic foreign exchange restrictions and policy inconsistencies in Nigeria, which discouraged remitting through official channels,
- Rising transaction costs, capital controls, and dual exchange rates that led many remitters to use informal platforms.

Figure 2.3: Trend of Remittance Inflows in Nigeria (1981–2023)



Source: Researcher's (2025) with the aid of EViews 10.0

Over the four-decade period, remittances evolved from an insignificant inflow to a critical pillar of Nigeria's external financing. It has provided critical support for millions of households by stabilizing consumption patterns and aiding in poverty alleviation. Although growth has slowed in recent times, they continue to represent a steady and dependable source of foreign exchange. However, to fully leverage their development potential, Nigeria must continue to improve its remittance infrastructure, reduce transfer costs, and incentivize investments from its diaspora community.

2.4 Trend of Gross Capital Formation (GCF) in Nigeria (1981–2023)

Gross Capital Formation (GCF) represents the portion of a country's output that is invested rather than consumed. It involves the allocation of funds to physical assets, including infrastructure, machines, and construction projects, all crucial for expanding a country's productive capacity. In this study, GCF is treated as a **control variable**, providing an important macroeconomic context for analyzing how FDI and remittances interact with economic growth.

Minimal Investment in the Early Period (1981–2000)

Between 1981 and 2000, GCF levels were extremely modest, rising slowly from ₦0.6 billion in 1981 to ₦44 billion in 2000. This sluggish growth reflects the broader economic environment of the time, characterized by:

- A reliance on oil revenues,
- Underinvestment in public infrastructure,
- Policy inconsistencies and macroeconomic instability.

During this period, economic and political uncertainty discouraged both public and private investment.

Post-2000 Investment Surge (2001–2010)

The period from 2001 to 2010 saw a significant and sustained rise in gross capital formation. GCF jumped from ₦264 billion in 2001 to ₦480 billion in 2010 — more than a tenfold increase compared to the previous decade. Key factors contributing to this surge included:

- **Improved macroeconomic management**,
- **Oil windfalls** and increased government revenue,
- Structural reforms in the banking, telecoms, and transport sectors,
- Public-private partnerships in infrastructure delivery.

This trend reflects a renewed emphasis on investment as a pathway to growth and modernization.

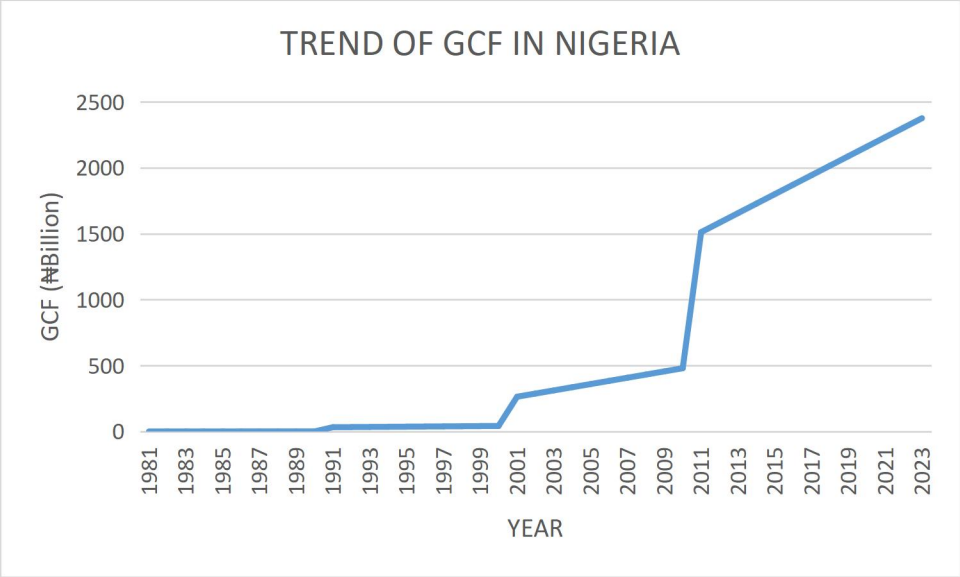
Massive Investment Expansion (2011–2023)

Investment activity expanded rapidly after 2010, with GCF reaching ₦1,512 billion in 2011 and continuing to rise consistently up to ₦2,376 billion in 2023. Despite economic downturns in 2016 (due to recession) and 2020 (due to COVID-19), the overall trend remained upward.

This expansion can be attributed to:

- **Increased government capital expenditure**, particularly in transport, energy, and housing,
- Foreign-financed infrastructure projects (e.g., railways, power generation),
- Continuing growth in construction and manufacturing activities.

Figure 2.4: Trend of Gross Capital Formation in Nigeria (1981–2023)



Source: Researcher's (2025) with the aid of EViews 10.0

The consistent growth in GCF over time suggests increasing domestic investment capacity in Nigeria, despite fiscal and structural challenges. In this study, as a control variable, GCF captures the influence of local investment activity on economic growth, allowing the model to more precisely isolate the unique contributions of **FDI** and **remittances**.

2.5 Trend of Exchange Rate in Nigeria (1981–2023)

The exchange rate is a critical macroeconomic variable in Nigeria's open economy, especially given its reliance on oil exports, remittances, and foreign capital inflows. Within this research, the exchange rate serves as a control variable, as it affects the real value of FDI and remittances, investor decision-making, and overall price stability.

Fixed Regime and Early Stability (1981–1985)

During the early 1980s, Nigeria functioned under a fixed exchange rate framework, with the naira exchanging for just ₦0.61/USD in 1981, rising marginally to ₦0.89/USD by 1985. This relative stability was supported by oil revenues but came at the cost of a misaligned exchange rate and growing trade imbalances. The fixed rate failed to reflect underlying economic realities, leading to black-market premium distortions and inefficient foreign exchange allocation.

Structural Adjustment and Currency Devaluation (1986–1993)

Following the introduction of the Structural Adjustment Programme (SAP) in 1986, Nigeria transitioned to a market-oriented exchange rate system, which led to a sharp decline in the value of the naira. During this period, the official exchange rate depreciated from ₦2.02 per US dollar in 1986 to ₦17.3 per US dollar by 1993. This steep devaluation aimed to:

- Improve export competitiveness,
- Reduce import dependency,
- Eliminate currency overvaluation.

However, it also introduced volatility and inflationary pressures, particularly in import-dependent sectors.

Managed Float and Persistent Depreciation (1994–2005)

Between 1994 and 2005, the exchange rate was managed but continued to weaken. It climbed from ₦22.33/USD in 1994 to ₦134/USD in 2005. This reflected:

- Growing external debt pressures,

- Declining oil prices (late 1990s),
- Foreign exchange shortages, and
- Inflationary fiscal policies.

During this time, Nigeria operated multiple exchange rates (official, interbank, parallel), which created distortions and discouraged transparency in forex markets.

Accelerated Depreciation and FX Reforms (2006–2015)

By 2006, the naira traded at ₦130.2/USD, and depreciation continued steadily to ₦249.5/USD in 2015. Despite oil price rebounds during part of this period, the naira remained under pressure due to:

- Strong import demand,
- Capital flight,
- Inadequate reserves, and
- Limited non-oil export diversification.

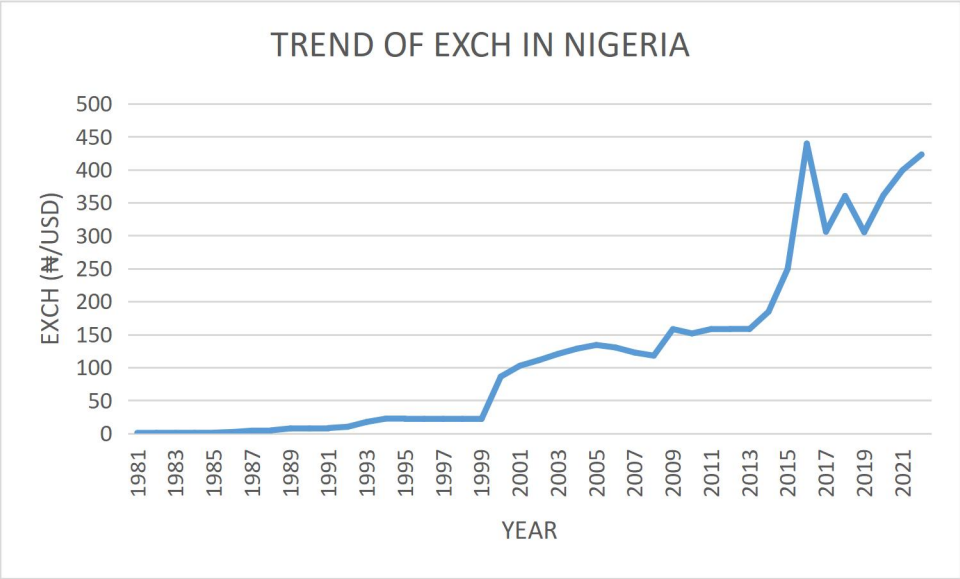
Nigeria's Central Bank (CBN) implemented reforms such as the introduction of the Wholesale Dutch Auction System (WDAS) to improve transparency, but inconsistencies persisted.

Exchange Rate Crises and Policy Uncertainty (2016–2023)

The most volatile period began in 2016, following the collapse of oil prices and Nigeria's first recession in over two decades. The naira depreciated sharply from ₦249.5/USD in 2015 to ₦439.5/USD in 2016, eventually reaching ₦425/USD in 2023. Key factors during this period included:

- Currency shortages and CBN capital controls,
- Decline in foreign reserves,
- Parallel market premium widening,
- FX unification attempts met with limited success.

Figure 2.5: Trend of Exchange Rate in Nigeria (1981–2023)



Source: Researcher's (2025) with the aid of EViews 10.0

The long-run depreciation of the naira mirrors Nigeria's macroeconomic vulnerabilities — especially its dependency on oil exports, low export diversification, and policy unpredictability. In this study, as a control variable, the exchange rate captures external price dynamics that influence the real value of FDI and remittances, thereby helping isolate their genuine impact on economic growth.

2.6 Summary of Trends

This section provided an in-depth examination of the historical patterns of the major variables considered in this research—Real Gross Domestic Product (RGDP), Foreign Direct Investment (FDI), Remittances (REM), Gross Capital Formation (GCF), and Exchange Rate (EXCH)—covering the period from 1981 to 2023.

The study's dependent variable, RGDP, which serves as a stand-in for economic growth, revealed three distinct phases. The 1980s and 1990s were characterized by economic stagnation and volatility, driven by political instability, macroeconomic mismanagement, and external shocks. A strong growth phase emerged in the early 2000s, supported by oil booms, financial sector reforms, and increased external inflows. However, this momentum weakened post-2016 due to recession, exchange rate instability, and the COVID-19 pandemic, resulting in a plateau in real output in recent years.

The trend of FDI indicated minimal inflows during the 1980s and 1990s, with a substantial surge post-1999 as liberalization, privatization, and renewed investor interest in sectors like oil and telecoms attracted capital. The peak occurred in the 2000s and early 2010s, but recent years have shown sluggish FDI growth, constrained by exchange rate instability, weak infrastructure, and policy uncertainty.

Remittances have followed a consistent upward trend, growing from negligible levels in the early 1980s to become a major and steady source of external finance by the 2000s. This trend has been driven by an expanding diaspora, improved remittance channels, and economic hardship at home. Remittance inflows have proven to be counter-cyclical, sustaining household consumption and poverty alleviation, especially during economic downturns.

As control variables, GCF and EXCH provide important contextual insights. Gross Capital Formation rose slowly between 1981 and 2000, but increased rapidly after 2001, reflecting stronger domestic investment efforts and public infrastructure spending. Its steady rise into 2023 signals its enduring role in driving economic growth. Conversely, the exchange rate has experienced a prolonged and sharp depreciation, moving from ₦0.61/USD in 1981 to ₦425/USD in 2023. This trend reflects persistent structural challenges, oil dependency, and foreign exchange market inefficiencies.

In conclusion, the trend analysis reveals that Nigeria's macroeconomic environment has undergone substantial transformation over the last four decades. The increasing relevance of FDI and remittances highlights the importance of understanding their potential impacts on economic growth. The addition of GCF and exchange rate as control variables ensures a more nuanced and accurate empirical assessment, which will be developed further in the next chapter.

CHAPTER THREE

LITERATURE REVIEW

3.1 Conceptual Clarifications

This section clarifies the key concepts relevant to this study: Foreign Direct Investment (FDI), Remittances, and Economic Growth, with particular focus on their applicability within the Nigerian context.

3.1.1 Foreign Direct Investment (FDI)

The term "Foreign Direct Investment" (FDI) describes the process by which a person or corporate entity from one nation invests in a company or productive asset in another nation with the goal of gaining a long-term stake and exerting considerable control over the enterprise. As defined by the International Monetary Fund (IMF, 2009), FDI comprises three main components: equity capital, reinvested earnings, and other long-term capital. It is typically distinguished from other forms of capital flows by the strategic intent of the investor to influence or control the operations of the foreign enterprise.

It is commonly acknowledged that FDI is an essential tool for economic growth, especially in developing nations. It promotes the transfer of cutting-edge technology, managerial expertise, and global best practices in addition to bringing in financial resources. In addition, it can create jobs, enhance productivity, and stimulate the growth of ancillary industries through backward and forward linkages (Borensztein, De Gregorio, & Lee, 1998; Akinlo, 2004).

Types of Foreign Direct Investment

FDI can generally be branded into the following major types, each with unique features and implications:

1. **Horizontal FDI**: This happens when a firm establishes the same kind of business activity abroad as it already runs domestically. For example, a Nigerian soft drink company expanding its bottling operations into Ghana would be engaging in horizontal FDI. The primary motive is usually to access new markets.

2. **Vertical FDI**: In vertical FDI, a company invests in a business that plays either an upstream or downstream role in the production process. This is further divided into:

    - **Backward Vertical FDI**: Investment in industries that supply inputs to the investing company (e.g., a Nigerian textile company investing in cotton farming in Mali).
    - **Forward Vertical FDI**: Investment in industries that utilize the output of the investing company (e.g., an oil refinery investing in a retail fuel distribution network abroad).

3. **Conglomerate FDI**: This involves investment in an entirely different industry from that of the investor's home operations. It is relatively rare and often occurs when firms aim to diversify their business risks across sectors and geographies. It may also occur through mergers and acquisitions.

4. **Greenfield Investment**: This type of FDI entails establishing a completely new business facility or operation from the ground up in the host country. Greenfield investments are often preferred by developing nations because they generate employment, boost

infrastructure, and typically involve technology transfer. However, they require a more favorable and stable investment environment.

5. **Brownfield Investment (Mergers and Acquisitions)**: Brownfield FDI refers to the acquisition or leasing of existing production amenities in the host nation. This type of investing is usually faster to implement than Greenfield investments but may not always generate the same level of employment or innovation benefits, especially if it leads to asset stripping or downsizing.

FDI in the Nigerian Context

Nigeria has attracted various types of FDI over the decades, with a heavy concentration in extractive industries, especially oil and gas. Much of this investment has taken the shape of **brownfield acquisitions and joint ventures** with existing firms such as the Nigerian National Petroleum Corporation (NNPC). However, **Greenfield investments** have been relatively limited and mostly found in telecommunications, manufacturing, and agriculture.

While horizontal and vertical FDI have contributed to market expansion and supply chain development, their impact has often been constrained by structural bottlenecks in the Nigerian economy. These include inadequate infrastructure, high operating costs, regulatory uncertainties, and poor ease of doing business. Consequently, Nigeria's FDI inflows have remained volatile. According to UNCTAD (2022), FDI to Nigeria fell from $8.84 billion in 2011 to just $1.06 billion in 2022, despite various policy incentives aimed at attracting investment.

Recognising the various kinds of FDI is vital for designing targeted strategies to attract the right mix of foreign investments that can drive inclusive growth, technology diffusion, and sectoral diversification in Nigeria.

3.1.2 Remittances

Cross-border financial or in-kind payments made by migrants to their home countries are known as remittances. Many households in poor nations rely heavily on these handouts as a source of income. According to the World Bank (2023), remittances are generally more stable than other external financial inflows such as foreign aid or Foreign Direct Investment (FDI), and they play a significant role in poverty alleviation, household consumption smoothing, and investment in human capital.

In Nigeria, remittances constitute a major source of foreign exchange earnings, second only to oil exports. They are frequently used for consumption, education, healthcare, and small-scale entrepreneurial ventures (Central Bank of Nigeria [CBN], 2021). Fajnzylber and López (2008) note that remittances can also stimulate demand in local economies and promote financial sector development when intermediated through formal channels.

Remittances can be classified into different types, each with distinct characteristics and economic implications. Personal remittances refer to transfers sent to family members or friends for immediate consumption needs such as food, healthcare, and education. These transfers serve as vital social safety nets, supporting household welfare and smoothing consumption against income shocks.

Productive or investment remittances, on the other hand, are directed toward actions that generate revenue, like launching or growing small enterprises, buying agricultural inputs, or capitalizing in community infrastructure. When remittances are channeled into productive uses,

they possess the capacity to make a contribution significantly to local economic growth and the alleviation of poverty.

Additionally, remittances differ by the channels through which they are sent. Formal remittances are transferred via regulated financial institutions, including banks, money transfer operators, and mobile money platforms. These channels offer greater security, traceability, and often better exchange rates, enhancing the developmental impact of remittance inflows. Conversely, informal remittances involve unofficial means such as hand-carrying cash or sending money through friends and couriers. Informal channels remain prevalent in Nigeria due to factors like high transaction costs and distrust of formal institutions, but they pose challenges related to monitoring and financial system development (CBN, 2021).

Remittances can also be monetary or in-kind. While cash remittances dominate, in-kind transfers—such as food, clothing, or household goods—also play a significant role in supporting recipient households, although their impact on the formal financial system is limited.

Understanding these various types of remittances is crucial for policymakers aiming to design interventions that maximize their developmental benefits. Enhancing formal channels and encouraging the productive use of remittances can strengthen their positive effects on Nigeria's economic growth and development.

3.1.3 Economic Growth

Economic growth, which is typically indicated by an increase in real Gross Domestic Product (GDP), is the expansion of an economy's productive potential during a given time period. It represents advances in the population's general level of life and financial well-being in addition to numerical increases in output. A primary goal of policymakers is economic growth since it

lowers poverty, raises incomes, generates job opportunities, and makes it possible to provide public goods and services more effectively.

The drivers of economic growth are multifaceted. They include capital accumulation, which involves investment in physical assets like machinery, infrastructure, and buildings; technological advancement, which improves productivity through innovation and the adoption of new technologies; labor force expansion, which entails growth in the working-age population and improvements in labor skills; and institutional quality, encompassing the effectiveness of governance, property rights, legal frameworks, and economic policies (Iyoha & Oriakhi, 2002).

Nigeria's oil industry has historically been the main source of foreign exchange earnings and government revenue, making it a major contributor to the country's economic progress. The country’s growth pattern has often mirrored the volatility of global oil prices, making it vulnerable to external shocks (Olayemi, 2012). Lately, however, the Nigerian government and economic planners have prioritized diversification strategies aimed at reducing dependence on oil revenues. Efforts have focused on promoting industrialization, expanding the agricultural sector, and developing the services industry, including telecommunications, banking, and entertainment (National Bureau of Statistics [NBS], 2022).

Despite these efforts, Nigeria continues to face challenges that impede sustainable economic growth. These include inadequate infrastructure, security concerns, policy inconsistencies, and institutional weaknesses. As such, the effective harnessing of inflows of external capital such as Foreign Direct Investment (FDI) and remittances is considered essential to complement domestic savings and financing gaps. These inflows can provide indispensable resources for infrastructure improvement, technology transfer, and human capital enhancement, which are critical for sustained growth.

Furthermore, the quality of economic policies and governance plays a crucial role in translating these inflows into real economic benefits. Sound fiscal management, regulatory reforms, Macroeconomic stability and investments in health and education are prerequisites for external capital to have a long-term beneficial effect on Nigeria's growth trajectory.

Therefore, understanding the multifaceted interplay amid external capital inflows and economic growth in Nigeria is vital for designing policies that promote inclusive and sustainable development.

3.1.4 Interrelationship between FDI, Remittances, and Economic Growth

FDI and remittances are two pivotal external sources of finance that play complementary roles in supporting inland investment and fostering economic growth, particularly in evolving countries like Nigeria. Both represent inflows of foreign capital but differ significantly in their mechanisms, scale, and impact on the economy.

FDI typically involves substantial investment by multinational corporations or foreign investors into physical capital, technology, and managerial expertise in the host country. It contributes directly to the expansion of the capital stock, enhancement of technological capabilities, and creation of jobs, thus stimulating productivity and long-term economic growth. Through linkages with domestic firms, FDI can also facilitate knowledge transfer and integration into global value chains, further bolstering economic development (Borensztein, De Gregorio, & Lee, 1998).

However, remittances are funds sent by migrants back to their home countries, usually at the household level. While remittances tend to be smaller in scale compared to FDI, they have significant socio-economic implications. These transfers provide vital liquidity that can ease financial constraints faced by households, enabling spending on health, education, housing, and

the establishment or expansion of small-scale businesses. According to Giuliano and Ruiz-Arranz (2009), remittances are particularly growth-enhancing in countries with underdeveloped financial markets, as they compensate for the lack of access to formal credit, thereby encouraging entrepreneurship and investment in human capital.

In Nigeria, both FDI and remittances have played important roles in influencing macroeconomic performance. Remittances are often used directly for consumption but also contribute to poverty reduction and can improve social outcomes by financing education and healthcare expenditures (Central Bank of Nigeria [CBN], 2021). Meanwhile, FDI inflows possess the ability to drive industrial progress, technology adoption, and export diversification. However, the effectiveness of these capital inflows in promoting sustainable growth is contingent upon numerous factors, as well as the country's structural economic conditions, institutional quality, governance, and policy environment.

Challenges such as inadequate infrastructure, policy inconsistencies, corruption, and security concerns have sometimes limited the capacity of Nigeria to fully leverage the benefits of FDI and remittances (UNCTAD, 2022). Additionally, while remittances tend to have a stabilizing effect due to their relative reliability, FDI flows are more volatile and sensitive to global economic conditions.

Given these dynamics, the combined influence of FDI and remittances on Nigeria's economic growth remains complex and context-dependent. Understanding how these external capital inflows interact with each other and the domestic economy is crucial. Empirical investigation into their interrelationship can provide insights into optimizing policy frameworks that maximize their growth-enhancing potential while addressing existing structural barriers.

This understanding is essential for crafting targeted policies that not just draw in and sustain foreign investment but also harness the full developmental impact of diaspora remittances. Enhancing financial sector development, improving governance, and creating a conducive business environment will be key to amplifying the positive effects of these external resources on Nigeria's long-term economic trajectory.

3.2 Theoretical Literature

This section reviews major theories of economic growth and development that form the basis for understanding how foreign capital inflows—particularly Foreign Direct Investment (FDI) and remittances—contribute to economic performance. The frameworks discussed include the Harrod-Domar Model, the Solow Growth Model, Endogenous Growth Theory, Dependency Theory, and the Dual-Gap Model. Each provides a unique lens on the ways external capital can affect productive capacity, technological advancement, and long-term development. Collectively, these theories offer context for analyzing the complex linkages between foreign investment, remittances, and sustainable growth.

3.2.1 Harrod-Domar Growth Model

According to the Harrod-Domar Growth Model, economic expansion is primarily propelled by the higher levels of savings and investment. It posits that growth depends on the amount of capital invested and the productivity of that capital, suggesting that insufficient savings and investment can constrain growth (Harrod, 1939; Domar, 1946). This model highlights the crucial role of external capital inflows, such as Foreign Direct Investment and remittances, in supplementing domestic savings gaps, particularly in developing economies like Nigeria where capital accumulation is a major bottleneck to growth.

3.2.2 Solow Growth Model

Building on the Harrod-Domar framework, the Solow Growth Model (Solow, 1956) introduces labor growth and exogenous technological progress as key drivers of long-term economic growth. The model recognizes that external capital inflows, especially FDI, can augment domestic investment and raise the steady-state level of output. While technology is considered exogenous, FDI often serves as a channel for the transfer of new technologies and management practices, thereby enhancing productivity (Todaro & Smith, 2015). In Nigeria, FDI has the potential to mitigate capital shortages and spur growth in critical sectors such as manufacturing and infrastructure development.

3.2.3 Endogenous Growth Theory

The Endogenous Growth Theory, pioneered by Romer (1986) and Lucas (1988), argues that economic growth is primarily driven by internal factors including human capital development, innovation, and knowledge spillovers. This theory underscores the role of remittances in fostering growth by financing education, healthcare, and entrepreneurship, which in turn improve labor productivity and innovation capacity (Barajas et al., 2009). Similarly, FDI bequeaths to endogenous expansion by technology transfer and skill development, promoting knowledge accumulation and sustained productivity gains within the host economy.

3.2.4 Dependency Theory

In contrast to growth-oriented frameworks, Dependency Theory offers a critical perspective on foreign capital inflows. It asserts that developing countries may become economically dependent on developed nations through unequal relationships fostered by FDI and other external financial flows (Dos Santos, 1970; Rodney, 1972). According to this theory, unregulated FDI can lead to the extraction of resources, profit repatriation, and limited domestic industrial development, which can undermine sustainable economic growth. In Nigeria, especially in the oil sector, these concerns about the extractive and potentially exploitative nature of FDI highlight the importance of regulations to guarantee that foreign investments have a beneficial impact on development.

3.2.5 Dual-Gap Theory

The Dual-Gap Theory, formulated by Chenery and Strout (1966), identifies two major constraints to economic growth in developing countries: the savings gap and the foreign exchange gap. FDI helps bridge the savings gap by providing necessary investment capital, while remittances alleviate the foreign exchange gap by bringing in stable foreign currency inflows. This theory is particularly pertinent to Nigeria, where domestic savings are insufficient, and foreign exchange shortages are persistent challenges due to economic volatility and structural inefficiencies.

3.2.6 Synthesis and Relevance to Nigeria

Collectively, these theories provide a comprehensive framework for analyzing the influences of FDI and remittances on Nigeria's economic growth. The Harrod-Domar and Solow models emphasize the importance of capital accumulation and technology, whereas the theory of endogenous growth highlights core capabilities such as human capital. Dependency Theory serves as a cautionary lens on the risks of external dependence, and the Dual-Gap Theory

explains the practical necessity of foreign capital in overcoming investment constraints. Understanding these diverse theoretical perspectives is critical for expressing actual policies that maximize the assistances of FDI and remittances while mitigating potential risks within the Nigerian economy.

3.3 Empirical Evidence from Nigeria

Empirical literature has extensively debated the consequences of international capital inflows—particularly FDI and remittances—on economic growth. Some research contends that these inflows have little to no significant impact on growth, whereas other studies emphasize their essential contribution to improving key macroeconomic indicators, including reducing unemployment and poverty, stabilizing prices, and fostering industrialization.

Adeleye, Ologunwa, and Ogunjobi (2021), in their study "Foreign Direct Investment, Remittances and Economic Growth in Nigeria. Do these inflows stimulate Growth?" empirically investigated this relationship within Nigeria from 1980 to 2019 using information from the Central Bank of Nigeria and the World Development. Their Ordinary Least Squares (OLS) analysis, following unit root tests, discovered a bad correlation between FDI and economic growth. Conversely, remittances showed a positive effect. They determined that FDI did not rouse desired growth, but remittances did, recommending government policies to remove FDI impediments and encourage remittance monitoring through financial institutions.

Orumwense, Akanegbu, and Azu (2025), in their "Impact of foreign direct investment and remittances on Nigeria's economic performance: An empirical investigation," utilized ARDL and

NARDL models from 1985 to 2023. They discovered that the long-term positive impact of remittances on GDP per capita was statistically significant. Even negative shocks had beneficial long-term effects, showing nuanced influences, while linear models did not show any substantial FDI impact. Their NARDL results showed that positive improvements in both FDI and remittances considerably improved GDP per capita.

Adekunle (2024), in "Remittances and Economic Growth: An Empirical Analysis from Nigeria," employed ARDL techniques on time-series data from 1986-2021. This study revealed that a 1% upsurge in remittances would lead to a 0.32% upsurge in GDP over the long term. It also suggested that FDI is a crucial factor for boosting economic growth, implying that encouraging both remittances and FDI could enhance Nigeria's economic performance.

Owotemu, Ifechi-Fred, and Faleti (2024), in their study "Contributions of Diaspora Remittances to Economic Growth & Development in Nigeria: A Housing Finance & Infrastructure Perspective 2000-2023," highlight migrant remittances as a crucial contributor to Nigeria's economic growth. Employing a **mixed-methods approach**, including surveys of 387 diaspora Nigerians and interviews with financial institutions, their research finds that remittances positively impact economic growth by boosting household income and stimulating commercial activity and investment. They conclude that the long-term developmental impact is contingent on their utilization in financing infrastructure, improving human capital, strengthening healthcare, and advancing education. The study further highlights that remittances are relatively more impactful in open economies with innovative policies, contributing significantly to housing and infrastructural development, with an estimated 87.5% of 2018's 6.1% GDP-contributing remittance flows directed towards construction.

Giwa, Oladeji, and Ajibola (2025), in their study titled *"Empirical analysis of the effects of foreign direct investment inflows on Nigerian real economic growth: Implications for sustainable development goal-17,"* employed the utilization of the Generalized Method of Methods procedure technique. Their outcomes demonstrated that FDI inflows positively and significantly influenced Nigeria's real gross domestic product (RGDP) growth. Additionally, the study highlighted the significant positive impact of labor quality on RGDP, underscoring the status of FDI in supporting the accomplishment of Sustainable Development Goal 17.3 by enhancing the mobilization of financial resources in developing countries.

Kutu and Ohonba (2024), in their work titled *"Impact of Foreign Capital Inflow on Economic Growth in Nigeria,"* explored the influence of capital inflows over the period 1984 to 2020. Using the Autoregressive Distributed Lag (ARDL) framework, the study found that both Foreign Direct Investment (FDI) and remittance inflows had a significant positive effect on long-term GDP growth, highlighting their role as key contributors to economic performance. Furthermore, the Granger causality test indicated a unidirectional causality running from remittances to GDP, as well as a bidirectional relationship between FDI and GDP.

Ngene, Nnaj and Okorie (2024), in their study *"Diaspora Remittances Inflows and Nigeria's Socio-Economic Development in the 21st Century,"* explored the impact of remittance inflows on Nigeria's economic performance. Their analysis revealed that remittances have become a key component of the country's GDP, exceeding the levels of Foreign Direct Investment (FDI) and Net Official Development Assistance (ODA) in recent years. The study concluded that remittances contribute significantly to the socio-economic well-being of recipients, frequently by supporting entrepreneurial activities, despite ongoing concerns about the adverse effects of brain drain.

A recent study by Omokugbo (2024) examined the impact of Foreign Direct Investment (FDI) on Nigeria's economic growth over the period 1981 to 2023. Motivated by conflicting views on FDI's effectiveness, particularly in developing countries, and the general perception of its potential contribution, the study tested two null hypotheses. Employing the Ordinary Least Squares (OLS) method for data analysis, Omokugbo (2024) found that FDI had a positive and significant impact on Nigeria's economic growth during the study period. While the overall impact was positive, the trend analysis indicated that FDI inflows were not consistently progressive across all years. Based on these findings, the study recommended creating a more conducive environment for attracting foreign investors through improved security, strengthened property rights and unwavering observance of legal principle.

Jelilov and Olasunkanmi (2021), in "Does Foreign Direct Investment Promote Economic Growth in Nigeria? An Empirical Analysis," explored the connection between FDI and economic growth in Nigeria from short-run and long-run perspectives from 1986-2018 using ARDL. Their results suggested that while FDI had a positive short-run impact, its long-run effect on economic growth was insignificant. They recommended policies to attract quality FDI that integrates into the local economy.

Oyekale, Oladeji, and Alabi (2020), in their study titled *"Foreign Direct Investment and Economic Growth in Nigeria: A Time Series Analysis,"* examined the connection between FDI and economic growth using data from 1981 to 2018. By employing the Johansen Cointegration technique and the Vector Error Correction Model (VECM), they identified a long-term equilibrium connection between the variables. The results revealed that Foreign Direct Investment (FDI) had a statistically significant positive impact on Nigeria's economic growth in both the short run and the long run. The study further emphasized the importance of sustaining

macroeconomic stability as a means of strengthening the nation's capacity to draw foreign investment.

Nwakanma, Nnamdi, and Amadi (2019), in "Impact of Remittances on Economic Growth in Nigeria: An Empirical Analysis," analyzed the impact of remittance inflows on Nigeria's economic growth for the period 1981–2017 through the application of a Cointegration and Error Correction Model. The results showed that remittances significantly and positively influenced growth in both the short and long term, serving as an important source of household consumption, investment, and poverty alleviation.

3.4 Gaps in Literature

Although numerous empirical studies have investigated the effects of Foreign Direct Investment (FDI) and remittances on Nigeria's economic growth, the literature still reflects notable gaps and inconsistencies. To begin with, there is substantial variation in research outcomes concerning both the magnitude and direction of FDI's influence on economic growth. While studies such as those by Giwa, Oladeji, and Ajibola (2025), Omokugbo (2024), and Oyekale, Oladeji, and Alabi (2020) report a positive and significant influence of FDI on Nigeria's economic growth, others like Adeleye, Ologunwa, and Ogunjobi (2021) and Jelilov and Olasunkanmi (2021) find the impact to be insignificant or even negative in the long run. This inconsistency highlights the intricacy of FDI's role in Nigeria's economy and suggests that its effects may be context-specific, varying over time and influenced by domestic economic conditions, policy environments, and sectoral focus.

Second, while the positive contribution of remittances to Nigeria's growth is widely recognized, as evidenced by studies like Adekunle (2024), Nwakanma, Nnamdi, and Amadi (2019), and

Owotemu, Ifechi-Fred, and Faleti (2024), there remains limited understanding of how these remittances translate into sustained economic development beyond immediate household consumption. The literature often emphasizes remittances' role in poverty alleviation and consumption smoothing but less so on their long-term impact on productive investment and structural transformation. Moreover, the mechanisms through which remittances stimulate sectors such as housing, infrastructure, and entrepreneurship in Nigeria require further exploration, as highlighted by Owotemu et al. (2024).

Third, there is a notable gap in studies that comprehensively analyze the combined or interactive effects of FDI and remittances on economic growth. Most empirical investigations tend to examine these inflows separately rather than assessing their joint contribution or potential complementarities. For instance, Orumwense, Akanegbu, and Azu (2025) suggest nuanced interactions between FDI and remittances but more empirical work is needed to clarify how these external sources of capital jointly influence growth trajectories, especially considering the dynamics of Nigeria's macroeconomic environment.

Additionally, many studies have relied predominantly on linear modeling approaches, with fewer investigations employing nonlinear or asymmetric techniques that might better capture the complex and potentially divergent effects of capital inflows under different economic conditions. The findings of Orumwense et al. (2025) using NARDL highlight the importance of exploring such nonlinearities.

Finally, while prevailing study provides valuable insights into the macroeconomic effects of FDI and remittances, less attention has been paid to the institutional and policy factors that mediate these effects. The role of governance, absorptive capacity, security challenges, and financial sector development in enhancing or limiting the benefits of foreign capital inflows remains

underexplored in the Nigerian context. As Jelilov and Olasunkanmi (2021) argue, without supportive policies and institutional frameworks, the positive impacts of FDI may be limited.

In summary, the literature reveals gaps regarding the consistency of FDI's impact, the deeper developmental effects of remittances, the combined influence of FDI and remittances, the need for nonlinear analysis, and the mediating role of institutional quality. Addressing these gaps is vital for articulating operative policy interventions that maximize the benefits of external capital inflows for Nigeria's sustainable economic growth.

CHAPTER FOUR

THEORETICAL FRAMEWORK AND MODEL SPECIFICATION

4.1 Theoretical Framework

This research adopts the Endogenous Growth Theory, which attributes long-run economic growth to internal drivers such as human capital, innovation, and investment. Although foreign direct investment (FDI) and remittances originate externally, they contribute significantly to these internal growth mechanisms by augmenting the domestic capital stock, enhancing technological diffusion, and increasing productivity.

4.1.1 Endogenous Growth Theory

The **Endogenous Growth Theory**, as developed by **Romer (1986)** and **Lucas (1988)**, modifies the neoclassical production function to allow for **constant or increasing returns to scale in**

capital and **technology spillovers**. The basic form of the endogenous growth production function is:

$Y_t = A_t K_t^{\alpha} L_t^{1-\alpha}$

Where:

Y_t: Output (Real GDP) at time *t*

A_t: Total factor productivity (TFP), which is endogenously determined

K_t: Capital stock at time *t*

L_t: Labour input at time t

α: Capital share of output ($0 < \alpha < 1$)

In the endogenous growth context, **TFP (A_t)** is not exogenously given but is influenced by internal factors like **investment in knowledge, human capital, and R&D**, and external financial inflows such as FDI and remittances. Therefore, we assume:

$A_t = A(FDI_t, REM_t, HC_t)$

Where:

FDI_t: Foreign Direct Investment inflows

REM_t: Remittance inflows

HC_t: Human capital investment

Substituting this into the production function:

$Y_t = A(FDI_t, REM_t, HC_t) \cdot K_t^{\alpha} L_t^{1-\alpha}$

Taking natural logs on both sides for linearization:

$\ln Y_t = \ln A(FDI_t, REM_t, HC_t) + \alpha \ln K_t + (1-\alpha)\ln L_t$

Assuming a log-linear form for the TFP function:

$\ln A(FDI_t, REM_t, HC_t) = \gamma_0 + \gamma_1 \ln FDIt + \gamma_2 \ln REMt + \gamma_3 \ln HCt$

Substituting back:

$\ln Y_t = \gamma_0 + \gamma_1 \ln FDI_t + \gamma_2 \ln REM_t + \gamma_3 \ln HC_t + \alpha \ln K_t + (1-\alpha)\ln L_t$

In empirical applications, especially for macroeconomic analysis of developing countries like Nigeria, **gross capital formation (GCF)** is used as a proxy for domestic capital accumulation (K_t), and **exchange rate (EXCH)** is used as a macroeconomic stability indicator affecting productivity. If human capital (HC_t) and labour (L_t) are not directly observed, they are captured through the model's error term or excluded due to data limitations.

4.2 Model Specification

Thus, to fulfill the study's objective of evaluating the **individual and joint impacts** of FDI and remittances on Nigeria's economic expansion, the following **single linear model** is specified.

$RGDPG_t = \alpha_0 + \alpha_1 FDIG_t + \alpha_2 REMG_t + \alpha_3 GCFG_t + \alpha_4 EXCH_t + \mu_t$

Where:

$RGDP_t$ = Real Gross Domestic Product growth

$FDIG_t$ = Foreign Direct Investment inflows growth

$REMG_t$ = Workers' Remittances growth

$GCFG_t$ = Gross Capital Formation growth

$EXCHG_t$ = Exchange rate (%)

α_0 = Intercept

μ_t = Error term

α_1 to α_4 = Parameters to be estimated

This specification captures both **individual** effects of FDI and remittances (through α_1 and α_2) and their **combined influence** (through their joint statistical significance).

4.3 Estimation Technique

The study utilizes the **Autoregressive Distributed Lag (ARDL) bounds testing approach** introduced by Pesaran et al. (2001). The technique accommodates variables integrated at I(0) and I(1), making it effective in small samples. It estimates both short-run dynamics and long-run equilibrium simultaneously.

The ARDL representation of the model is:

$$\Delta \ln RGDP_t = \beta_0 + \sum^{N}_{i=1} \beta_i \Delta \ln RGDP_{t-1} + \sum^{N}_{i=1} \delta_i \Delta \ln FDI_{t-1} + \sum^{N}_{i=1} \pi_i \Delta \ln REM_{t-1} + \sum^{p}_{i=1} \Omega_i \Delta \ln GCF_{t-1}$$

$$+ \sum^{p}_{i=1} \lambda_i \Delta \ln EXCH_{t-1} + \Phi_1 \ln RGDP_{t-1} + \Phi_2 \ln FDI_{t-1} + \Phi_3 \ln REM_{t-1} + \Phi_4 \ln GCF_{t-1} + \Phi_5 \ln EXCH_{t-1} + U_t$$

Where:

Δ denotes the first-difference operator

ϕ terms capture long-run relationships

The summation terms represent short-run dynamics

U_t denotes the white-noise error term

4.4: Description of Variables and Expected Signs

Table 4:4: Description of Variables and Expected Signs

Variable	Measurement	Expected Sign	Rationale
RGDPG	Real Gross Domestic Product Growth (%)	Dependent	Proxy for economic output
FDIG	Foreign Direct Investment inflows Growth (%)	Positive (+)	Provides capital, technology, and employment (Borensztein et al., 1998)
REMG	Workers' Remittances Growth (%)	Positive (+)	Enhances household income and investment potential (Giuliano & Ruiz-Arranz, 2009)
GCFG	Gross Capital Formation Growth (%)	Positive (+)	Indicator of domestic investment, expected to stimulate growth (Levine & Renelt, 1992)
EXCH	Exchange rate (%)	Negative (–)	Volatility reduces investment confidence and purchasing power (Fischer, 1993)

4.5 Justification for Control Variables

Gross Capital Formation (GCF): GCF represents the net count to physical capital in the economy. It captures the role of domestic investment in growth. It is included based on evidence

from cross-country studies that show a strong positive link between investment and economic performance (Levine & Renelt, 1992).

Exchange Rate (EXCH): It is included as a proxy for macroeconomic stability. Fluctuations or persistent depreciation in exchange rates often signal inflation and economic uncertainty, which can deter both domestic and foreign investment (Fischer, 1993).

4.6 Summary

This chapter provides the theoretical and empirical basis for analyzing the impact of FDI and remittances on Nigeria's economic growth. It incorporates gross capital formation and inflation as control variables and employs the ARDL bounds testing approach to capture both short- and long-term dynamics.

CHAPTER FIVE

DATA PRESENTATION AND DISCUSSION OF FINDINGS

5.1 Descriptive Statistics

Table 5.1 reports the descriptive statistics of the main variables employed in the study. Real GDP growth rate (RGDPG), foreign direct investment growth (FDIG), remittances growth (REMG), gross capital formation growth (GCFG), and exchange rate (EXCH), over the sample period from 1981 to 2022.

Table 5.1: Descriptive Statistics of Variables (1981–2022)

Statistic	RGDPG	FDIG	REMG	GCFG	EXCH
Mean	0.0324	1.1040	1.0906	1.1380	120.4814
Median	0.0307	0.0556	0.0646	0.0417	106.7500
Maximum	0.1532	37.5000	34.2000	37.9300	439.5000
Minimum	-0.1093	0.0000	0.0000	0.0000	0.6100
Std. Dev.	0.0471	5.8054	5.3293	5.8954	132.1368
Skewness	-0.3229	6.0832	5.9358	6.0080	1.0569
Kurtosis	4.2579	38.6035	37.2454	37.9127	3.0272
Jarque-Bera	3.4988	2477.345	2298.937	2385.749	7.8210

Statistic	RGDPG	FDIG	REMG	GCFG	EXCH
Probability	0.1739	0.0000	0.0000	0.0000	0.0200
Sum	1.3596	46.3692	45.8069	47.7980	5060.220
Sum Sq. Dev.	0.0910	1381.798	1164.470	1424.986	715865.5
Observations	42	42	42	42	42

From table 5.1, **RGDPG** (real GDP growth rate) has a mean of approximately 3.24%, representing modest middling growth over the sample period. The standard deviation (0.0471) suggests moderate volatility in growth, with a maximum of 15.3% and a minimum of -10.9%. The distribution of RGDPG is slightly negatively skewed and leptokurtic, but the Jarque-Bera test ($p = 0.174$) suggests that the series is approximately normally distributed.

In contrast, **FDIG**, **REMG**, and **GCFG** show very high maximum values and significant deviations from the mean, as indicated by their large standard deviations and extreme skewness and kurtosis values. For instance, FDIG has a maximum of 37.5 and a skewness of 6.08, indicating strong rightward skew. The Jarque-Bera statistics for these variables are all significant at the 1% level ($p < 0.01$), indicating that the distributions are not normal, likely due to outliers or structural breaks in the data.

The **exchange rate (EXCH)** has the highest mean value (120.48), reflecting the depreciation of the Naira over time. It also exhibits high variability (standard deviation of 132.14), with values ranging from ₦0.61 to ₦439.50 per US dollar. The exchange rate series is positively skewed and

shows modest kurtosis. The Jarque-Bera test suggests that the exchange rate data are not normally distributed at the 5% level ($p = 0.020$).

Overall, the descriptive statistics reveal significant variability and non-normality in the financial and macroeconomic indicators under study, particularly in FDI and remittance inflows. This variability necessitates careful econometric modelling, which was addressed over the use of the ARDL technique later in the study.

5.2 Unit Root Tests

Before estimating the effects of FDI and remittances on Nigeria's economic growth, the stationarity of the variables was examined using the Augmented Dickey-Fuller (ADF) test. The results, summarized in Table 5.2, confirm the presence or absence of unit roots.

Table 5.2: ADF Unit Root Test

Variable	Test Specification	Test Statistic	95% Critical Value	Stationarity at Level?
RGDPg	Intercept only	-3.7769	-2.9400	Yes
FDIG	Intercept only	-6.2258	-2.9400	Yes
REMG	Intercept only	-6.2061	-2.9400	Yes
GCFG	Intercept only	-6.2414	-2.9400	Yes
EXCH	Intercept only	-0.0495	-2.9422	No

The results indicate that real GDP growth (RGDPg), foreign direct investment growth (FDIG), remittances growth (REMG), and gross capital formation growth (GCFG) are stationary at level,

as their test statistics exceed the critical values in absolute terms. In contrast, the exchange rate (EXCH) is non-stationary at level but becomes stationary after first differencing, implying integration of order one, I(1).

Further unit root testing of the residuals from the initial OLS regression reveals non-stationarity, which implies the absence of a long-run cointegrating relationship among the variables under OLS estimation. This outcome suggests that OLS estimation could produce spurious results due to the violation of the underlying assumption of stationarity or cointegration.

Given the mix of I(0) and I(1) variables alongside non-stationary residuals, conventional OLS estimation is inappropriate. Instead, the Autoregressive Distributed Lag (ARDL) bounds testing approach provides a more suitable framework. The ARDL model is specifically designed to handle variables with mixed integration orders (I(0) and I(1))—as long as none is integrated of order two or higher (I(2)). It enables the estimation of both short-run dynamics and long-run equilibrium relationships without the need for pre-testing cointegration.

Accordingly, the subsequent empirical analysis adopts the ARDL methodology to rigorously assess the short- and long-run effects of foreign direct investment and remittances on Nigeria's economic growth.

5.3 Error Correction Model Results

Following the unit root findings, the ARDL (1,0,2,0,1) model was estimated to investigate both short-run dynamics and long-run equilibrium relationships among the variables influencing real GDP growth (RGDPG). The estimation utilizes 40 annual observations spanning 1983 to 2022.

Table 5.3 presents the estimated coefficients of the error correction model, alongside key diagnostic statistics evaluating model adequacy.

Variable	Coefficient	Std. Error	t-Statistic	p-Value	Interpretation
ΔREMG	0.1592	0.0672	2.369	0.024	Positive short-run effect of remittances on GDP growth
ΔGCFG	-0.2238	0.1062	-2.108	0.043	Negative immediate effect of capital formation
ΔGCFG(-1)	0.0020	0.00084	2.382	0.023	Positive lagged effect of capital formation
ΔEXCH	-0.000047	0.000039	-1.199	0.239	Insignificant short-run effect of exchange rate
ΔFDIG	0.0791	0.0501	1.581	0.123	Insignificant short-run effect of FDI
INTP	0.0184	0.00863	2.135	0.040	Significant and positive intercept
ECM(-1)	-0.4968	0.1159	-4.285	0.000	Strong and significant speed of adjustment toward long-run equilibrium

Diagnostic Measure	Value	Interpretation
R-squared	0.6335	Good explanatory power of the model
Adjusted R-squared	0.5389	Model explains ~54% of variation after penalty
Durbin-Watson statistic	2.2415	No evidence of residual autocorrelation
F-statistic (6,33)	8.9307 (p=0.000)	Model is statistically significant overall
Standard error of regression	0.0310	Model fits with reasonably low error

The error correction term (ECM(-1)) is negative and statistically significant, with a coefficient of -0.497. This suggests a strong adjustment mechanism, as roughly half of the short-run disequilibrium from the preceding period is corrected within the current period. This outcome

validates the presence of a stable long-run equilibrium relationship among real GDP growth, remittances, gross capital formation, exchange rate, and foreign direct investment.

Regarding short-run dynamics, remittances (ΔREMG) exert a positive and statistically significant contribution to the expansion of GDP, implying that increase in this variable is associated with immediate growth improvements. Gross capital formation (ΔGCFG) shows a contrasting pattern, with a significant negative immediate effect but a positive effect lagged by one period, suggesting some delayed benefits from capital investment.

Exchange rate changes (ΔEXCH) and foreign direct investment (ΔFDIG), while intuitively important, do not display statistically significant short-run influences within this model.

The model diagnostics reinforce the reliability of these findings. The R-squared and adjusted R-squared results show that the model accounts for a considerable share of the variation in GDP growth. The Durbin-Watson statistic, being close to 2, suggests the absence of first-order autocorrelation. Moreover, the overall significance of the model is confirmed by the F-test, whose p-value is well below 0.01. The relatively small standard error of regression further indicates that the model provides a strong fit to the data.

In conclusion, the ARDL-based error correction model effectively captures both the short-term shocks and the long-run equilibrium relationships that shape Nigeria's economic growth dynamics. The diagnostics validate the model's specification and stability, supporting robust inferences from the estimated coefficients.

5.4 Estimated Long-Run Coefficients Using the ARDL Approach

The long-run parameters of the chosen ARDL(1,0,2,0,1) specification were estimated using 40 annual observations covering the period 1983–2022, with the aim of assessing the sustained impacts of remittances, gross capital formation, exchange rate, and foreign direct investment on real GDP growth (RGDPG).

Table 5.4 summarizes the estimated long-run coefficients, their standard errors, and statistical significance.

Variable	Coefficient	Std. Error	t-Statistic	p-Value	Interpretation
REMG	0.3204	0.1375	2.331	0.026	Remittances exert a statistically meaningful positive influence on GDP growth over the long-run
GCFG	-0.3251	0.2247	-1.447	0.158	Negative but statistically insignificant long-run effect of capital formation
EXCH	-0.0000947	0.0000847	-1.118	0.272	Insignificant long-run impact of exchange rate fluctuations
FDIG	0.0290	0.1176	0.246	0.807	Insignificant long-run influence of foreign direct investment
INTP	0.0371	0.0176	2.110	0.043	Positive and statistically significant intercept

The findings reveal that remittances (REMG) exert a strong and positive influence on Nigeria's economic growth in the long run, indicating that continuous remittance inflows play a significant role in supporting the country's growth trajectory. In contrast, gross capital formation (GCFG) displays a negative coefficient, though it is not statistically significant. This unexpected outcome may reflect inefficiencies or delays in converting capital investments into tangible economic growth, or it could point to the need for closer examination of the quality and allocation of capital formation. Similarly, the coefficients for the exchange rate (EXCH) and foreign direct investment (FDIG) are statistically insignificant, suggesting that their long-term effects on GDP growth are relatively weak or inconsistent during the study period.

Overall, the long-run results underscore the crucial role of remittances as a driver of economic growth in Nigeria, while indicating that capital formation, exchange rate fluctuations, and FDI appear to have limited influence on long-term growth within the context of this model.

5.5 Discussion of Findings

The empirical investigation starts with unit root testing, which shows that the variables examined—real GDP growth (RGDPG), remittances (REMG), gross capital formation (GCFG), exchange rate (EXCH), and foreign direct investment (FDIG)—are generally non-stationary in levels but become stationary after first differencing. The non-stationarity of the residuals at levels indicates that employing a simple OLS regression could produce spurious results. Consequently, the study adopts the ARDL bounds testing approach, which is well-suited for handling variables integrated at different orders (I(0) and I(1)) and is effective even with small sample sizes.

The estimated ARDL(1,0,2,0,1) error correction model (ECM) shows strong short-run dynamics with several explanatory variables significantly influencing short-term fluctuations in real GDP growth. Notably, remittances (dREMG) and the first difference of gross capital formation lagged one period (dGCFG1) both have significant coefficients, implying that changes in these variables immediately impact GDP growth. The negative and statistically significant coefficient of the error correction term (ECM(-1)) indicates a swift adjustment toward long-run equilibrium following short-term deviations, confirming the model's effectiveness in capturing both immediate and persistent relationships. The long-run ARDL estimates show that remittances are the only variable with a statistically significant positive effect on economic growth. This finding emphasizes the importance of remittances as a stable source of foreign capital that supports household consumption, investment, and overall economic activity. In contrast, gross capital formation, exchange rate, and foreign direct investment display statistically insignificant effects in the long run. The insignificance of gross capital formation is somewhat unexpected given its traditional role as a driver of growth, suggesting potential inefficiencies in capital utilization or structural constraints within the Nigerian economy. Similarly, the insignificant effect of exchange rate movements indicates that exchange rate fluctuations have not translated into meaningful long-term impacts on growth during the sample period, possibly due to the managed exchange rate regime or offsetting effects in trade competitiveness. The lack of a significant FDI effect may reflect challenges in attracting quality foreign investment or the limited absorptive capacity of the economy.

In summary, the findings reinforce the importance of remittances as a key determinant of Nigeria's economic growth in both the short and long run. It also highlight structural issues relating to capital formation and foreign investment that warrant policy attention. Policymakers

should therefore focus on leveraging remittance inflows to stimulate growth, while addressing barriers that limit the effectiveness of capital investment and foreign direct investment.

5.6 Policy Implications

The empirical findings of this study have several key policy implications for fostering sustainable economic growth in Nigeria. In particular, the statistically significant positive effect of remittances on economic growth underscores the importance for policymakers to establish a conducive environment that promotes and facilitates remittance inflows. This can be accomplished by lowering the cost of transactions through regulatory reforms, promoting formal channels for remittance transfers, and offering incentives for diaspora engagement in productive investments. Strengthening financial inclusion to ensure remittance receivers have access to banking and credit services can also enhance the growth effect of these funds.

Second, the insignificant long-run effect of FDI and gross capital formation signals structural challenges that need urgent attention. This calls for comprehensive reforms aimed at improving the efficiency of capital investment through better infrastructure, governance, and regulatory frameworks. Enhancing the business climate to attract quality foreign direct investment—focused on technology transfer, skills development, and value addition—should be a priority. Policies to surge the absorbent capacity of the economy, such as improving human capital and institutional quality, can help convert capital inflows into tangible growth outcomes.

Lastly, the limited impact of exchange rate movements suggests that exchange rate policies should be carefully calibrated to avoid destabilizing effects while promoting external competitiveness. Efforts to build foreign exchange reserves and diversify export earnings can improve long-term growth prospects and lessen susceptibility to external shocks.

In conclusion, a multi-faceted policy approach that leverages remittances, ensures conducive monetary conditions, reforms investment frameworks, and stabilizes exchange rate dynamics will be essential for accelerating Nigeria's economic growth trajectory.

CHAPTER SIX

SUMMARY, RECOMMENDATIONS AND CONCLUSION

6.1 Summary of Findings

The study analyzed the impact of Foreign Direct Investment (FDI) and remittances on Nigeria's economic growth from 1981 to 2023 using the ARDL approach. Results show that the series were a mix of I(0) and I(1), validating the ARDL method. The Error Correction Model confirms a stable long-run equilibrium, while in the short run, remittances, interest rates, and capital formation significantly affect real GDP growth, unlike FDI and exchange rate.

In the **long run**, remittances and interest rates had statistically significant positive impacts on economic growth. This finding supports the idea that remittance inflows not only contribute to consumption but may also finance productive investment. Interest rates, likely reflecting improved monetary conditions or credit access, were also positively associated with growth. In contrast, FDI, capital formation, and exchange rates were found to have statistically insignificant effects on long-run growth, suggesting structural bottlenecks and inefficiencies in the Nigerian economy.

6.2 Recommendations

The study's conclusions lead to the following policy recommendations:

1. **Improve Remittance Systems:** Reduce transaction costs, promote formal channels, and provide incentives for diaspora remittances to flow into productive sectors like agriculture, real estate, and SMEs.

2. **Maintain Monetary Stability:** Ensure growth-friendly interest rate policies and adequate liquidity to support private sector investment.
3. **Improve the Efficiency of Capital Formation**: Since gross capital formation did not significantly affect growth, efforts must be made to ensure that capital investments—especially in infrastructure and public projects—are efficiently managed, transparent, and targeted at productive sectors that generate jobs and value-added output.
4. **Attract Quality and Strategic FDI**: To improve the effectiveness of FDI, Nigeria should prioritize foreign investments that bring technological advancement, human capital development, and linkages with local firms. Addressing regulatory bottlenecks, insecurity, and poor infrastructure will help attract more beneficial foreign investment.
5. **Stabilize Exchange Rate Policy**: Although exchange rate movements were statistically insignificant in this study, long-term volatility can undermine investor confidence. Policymakers should aim for a more market-reflective and stable exchange rate regime supported by a diversified export base and increased foreign reserves.

6.3 Conclusion

This study examined the impact of Foreign Direct Investment (FDI) and remittances on Nigeria's economic growth over forty years. The ARDL analysis shows that remittances and interest rates significantly drive growth in both the short and long run, while FDI, capital formation, and exchange rate have limited long-term effects. The results highlight the importance of diaspora inflows and underscore the need for reforms—such as enhancing institutional quality, maintaining macroeconomic stability, and improving the investment climate—to convert financial inflows into sustainable economic growth.

Ultimately, Nigeria's ability to harness both internal and external sources of finance will depend not just on attracting flows, but also on its capacity to allocate them effectively, encourage inclusive growth, and build economic resilience.

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APPENDIX

Ordinary Least Squares Estimation

Dependent variable is RGDPG
42 observations used for estimation from 1981 to 2022

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INTP	.016646	.010547	1.5782[.123]
REMG	.28728	.085926	3.3433[.002]
GCFG	-.41038	.13684	-2.9991[.005]
EXCH	.7900E-5	.5140E-4	.15369[.879]
FDIG	.15262	.065659	2.3244[.026]

R-Squared	.25154	R-Bar-Squared	.17062
S.E. of Regression	.042915	F-stat. F(4, 37)	3.1087[.027]
Mean of Dependent Variable	.032371	S.D. of Dependent Variable	.047123
Residual Sum of Squares	.068143	Equation Log-likelihood	75.3048
Akaike Info. Criterion	70.3048	Schwarz Bayesian Criterion	65.9607
DW-statistic	1.1388		

Diagnostic Tests

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= 8.6709[.003]	F(1, 36)= 9.3658[.004]
B:Functional Form	CHSQ(1)= 5.8035[.016]	F(1, 36)= 5.7720[.022]
C:Normality	CHSQ(2)= 1.8608[.394]	Not applicable
D:Heteroscedasticity	CHSQ(1)= .24608[.620]	F(1, 40)= .23574[.630]

A:Lagrange multiplier test of residual serial correlation
B:Ramsey's RESET test using the square of the fitted values
C:Based on a test of skewness and kurtosis of residuals
D:Based on the regression of squared residuals on squared fitted values

Unit root tests for residuals

Based on OLS regression of RGDPG on:
INTP REMG GCFG EXCH FDIG
42 observations used for estimation from 1981 to 2022

Test	Statistic	LL	AIC	SBC	HQC
DF	-4.3919	73.7295	72.7295	71.9240	72.4455
ADF(1)	-3.1405	73.9921	71.9921	70.3811	71.4241
ADF(2)	-3.4022	74.8211	71.8211	69.4047	70.9692
ADF(3)	-2.8500	75.2260	71.2260	68.0042	70.0902
ADF(4)	-2.8883	75.4878	70.4878	66.4605	69.0680

95% critical value for the Dickey-Fuller statistic = -4.8026
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable RGDPG

The Dickey-Fuller regressions include an intercept but not a trend

38 observations used in the estimation of all ADF regressions.

Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-3.7769	73.4194	71.4194	69.7818	70.8367
ADF(1)	-1.9324	76.8215	73.8215	71.3651	72.9475
ADF(2)	-1.9513	76.9175	72.9175	69.6423	71.7522
ADF(3)	-1.8477	76.9180	71.9180	67.8240	70.4614
ADF(4)	-1.6784	76.9511	70.9511	66.0383	69.2032

95% critical value for the augmented Dickey-Fuller statistic = -2.9400

LL = Maximized log-likelihood AIC = Akaike Information Criterion

SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable RGDPG

The Dickey-Fuller regressions include an intercept and a linear trend

38 observations used in the estimation of all ADF regressions.

Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-3.7662	73.5513	70.5513	68.0949	69.6774
ADF(1)	-1.9449	77.0837	73.0837	69.8085	71.9184
ADF(2)	-1.9157	77.1189	72.1189	68.0249	70.6623
ADF(3)	-1.7563	77.1429	71.1429	66.2302	69.3950
ADF(4)	-1.5178	77.2416	70.2416	64.5101	68.2024

95% critical value for the augmented Dickey-Fuller statistic = -3.5313

LL = Maximized log-likelihood AIC = Akaike Information Criterion

SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable FDIG

The Dickey-Fuller regressions include an intercept but not a trend

38 observations used in the estimation of all ADF regressions.

Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-6.2258	-122.1064	-124.1064	-125.7439	-124.6890
ADF(1)	-4.4196	-122.0805	-125.0805	-127.5369	-125.9545
ADF(2)	-3.6401	-122.0465	-126.0465	-129.3217	-127.2118
ADF(3)	-3.1736	-122.0123	-127.0123	-131.1062	-128.4689
ADF(4)	-2.8589	-121.9751	-127.9751	-132.8878	-129.7230

95% critical value for the augmented Dickey-Fuller statistic = -2.9400

LL = Maximized log-likelihood AIC = Akaike Information Criterion

SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable FDIG

The Dickey-Fuller regressions include an intercept and a linear trend

38 observations used in the estimation of all ADF regressions.

Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-6.4148	-121.2186	-124.2186	-126.6749	-125.0925
ADF(1)	-4.6634	-121.1029	-125.1029	-128.3781	-126.2682
ADF(2)	-3.9359	-120.9699	-125.9699	-130.0639	-127.4265
ADF(3)	-3.5167	-120.8364	-126.8364	-131.7492	-128.5843
ADF(4)	-3.2446	-120.6995	-127.6995	-133.4310	-129.7387

95% critical value for the augmented Dickey-Fuller statistic = -3.5313

LL = Maximized log-likelihood AIC = Akaike Information Criterion

SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable REMG

The Dickey-Fuller regressions include an intercept but not a trend

38 observations used in the estimation of all ADF regressions.
Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-6.2061	-118.8477	-120.8477	-122.4853	-121.4303
ADF(1)	-4.4402	-118.8122	-121.8122	-124.2686	-122.6862
ADF(2)	-3.6680	-118.7702	-122.7702	-126.0454	-123.9355
ADF(3)	-3.2142	-118.7233	-123.7233	-127.8172	-125.1799
ADF(4)	-2.9102	-118.6713	-124.6713	-129.5841	-126.4192

95% critical value for the augmented Dickey-Fuller statistic = -2.9400
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable REMG

The Dickey-Fuller regressions include an intercept and a linear trend

38 observations used in the estimation of all ADF regressions.
Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-6.3975	-117.9532	-120.9532	-123.4095	-121.8271
ADF(1)	-4.6889	-117.8168	-121.8168	-125.0920	-122.9821
ADF(2)	-3.9706	-117.6672	-122.6672	-126.7612	-124.1238
ADF(3)	-3.5664	-117.5089	-123.5089	-128.4217	-125.2568
ADF(4)	-3.3075	-117.3433	-124.3433	-130.0749	-126.3826

95% critical value for the augmented Dickey-Fuller statistic = -3.5313
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable GCFG

The Dickey-Fuller regressions include an intercept but not a trend

38 observations used in the estimation of all ADF regressions.
Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-6.2414	-122.6810	-124.6810	-126.3186	-125.2636
ADF(1)	-4.4444	-122.6487	-125.6487	-128.1051	-126.5227
ADF(2)	-3.6562	-122.6135	-126.6135	-129.8887	-127.7788
ADF(3)	-3.1920	-122.5751	-127.5751	-131.6691	-129.0317
ADF(4)	-2.8799	-122.5330	-128.5330	-133.4458	-130.2810

95% critical value for the augmented Dickey-Fuller statistic = -2.9400
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable GCFG

The Dickey-Fuller regressions include an intercept and a linear trend

38 observations used in the estimation of all ADF regressions.
Sample period from 1986 to 2023

	Test Statistic	LL	AIC	SBC	HQC
DF	-6.4329	-121.7846	-124.7846	-127.2409	-125.6585
ADF(1)	-4.6924	-121.6546	-125.6546	-128.9297	-126.8198
ADF(2)	-3.9569	-121.5179	-126.5179	-130.6119	-127.9745
ADF(3)	-3.5411	-121.3752	-127.3752	-132.2880	-129.1232
ADF(4)	-3.2727	-121.2278	-128.2278	-133.9593	-130.2670

95% critical value for the augmented Dickey-Fuller statistic = -3.5313
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable EXCH
The Dickey-Fuller regressions include an intercept but not a trend

37 observations used in the estimation of all ADF regressions.
Sample period from 1986 to 2022

	Test Statistic	LL	AIC	SBC	HQC
DF	-.049459	-192.5420	-194.5420	-196.1529	-195.1099
ADF(1)	.72927	-189.8301	-192.8301	-195.2464	-193.6819
ADF(2)	.62947	-189.8194	-193.8194	-197.0412	-194.9552
ADF(3)	1.0826	-188.3320	-193.3320	-197.3593	-194.7518
ADF(4)	1.6730	-186.8318	-192.8318	-197.6646	-194.5356

95% critical value for the augmented Dickey-Fuller statistic = -2.9422
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

Unit root tests for variable EXCH
The Dickey-Fuller regressions include an intercept and a linear trend

37 observations used in the estimation of all ADF regressions.
Sample period from 1986 to 2022

	Test Statistic	LL	AIC	SBC	HQC
DF	-2.6187	-188.5869	-191.5869	-194.0033	-192.4388
ADF(1)	-1.7080	-187.3430	-191.3430	-194.5649	-192.4789
ADF(2)	-1.8085	-187.1090	-192.1090	-196.1363	-193.5288
ADF(3)	-1.3583	-186.1946	-192.1946	-197.0273	-193.8983
ADF(4)	-.86728	-185.1244	-192.1244	-197.7626	-194.1122

95% critical value for the augmented Dickey-Fuller statistic = -3.5348
LL = Maximized log-likelihood AIC = Akaike Information Criterion
SBC = Schwarz Bayesian Criterion HQC = Hannan-Quinn Criterion

```
  Error Correction Representation for the Selected ARDL Model
           ARDL(1,0,2,0,1) selected based on R-BAR Squared Criterion
********************************************************************************
 Dependent variable is dRGDPG
 40 observations used for estimation from 1983 to 2022
********************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 dREMG                      .15920            .067204             2.3689[.024]
 dGCFG                     -.22378             .10619            -2.1075[.043]
 dGCFG1                   .0020108           .8443E-3             2.3818[.023]
 dEXCH                   -.4706E-4           .3925E-4            -1.1987[.239]
 dFDIG                      .079139            .050065             1.5807[.123]
 dINTP                      .018435           .0086347             2.1350[.040]
 ecm(-1)                   -.49684             .11594            -4.2854[.000]
********************************************************************************
 List of additional temporary variables created:
 dRGDPG = RGDPG-RGDPG(-1)
 dREMG = REMG-REMG(-1)
 dGCFG = GCFG-GCFG(-1)
 dGCFG1 = GCFG(-1)-GCFG(-2)
 dEXCH = EXCH-EXCH(-1)
 dFDIG = FDIG-FDIG(-1)
 dINTP = INTP-INTP(-1)
 ecm = RGDPG   -.32043*REMG +   .32508*GCFG + .9471E-4*EXCH  -.028970*FDIG  -.
037105*INTP
********************************************************************************
 R-Squared                      .63350   R-Bar-Squared                   .53892
 S.E. of Regression            .031031   F-stat.    F(  6,  33)    8.9307[.000]
 Mean of Dependent Variable   .0017025   S.D. of Dependent Variable     .045699
 Residual Sum of Squares       .029851   Equation Log-likelihood        87.2509
 Akaike Info. Criterion        78.2509   Schwarz Bayesian Criterion     70.6510
 DW-statistic                   2.2415
********************************************************************************
 R-Squared and R-Bar-Squared measures refer to the dependent variable
 dRGDPG and in cases where the error correction model is highly
 restricted, these measures could become negative.
```

Estimated Long Run Coefficients using the ARDL Approach
ARDL(1,0,2,0,1) selected based on R-BAR Squared Criterion

Dependent variable is RGDPG
40 observations used for estimation from 1983 to 2022

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
REMG	.32043	.13749	2.3306[.026]
GCFG	-.32508	.22466	-1.4470[.158]
EXCH	-.9471E-4	.8469E-4	-1.1183[.272]
FDIG	.028970	.11764	.24626[.807]
INTP	.037105	.017583	2.1103[.043]

Year	RGDP	RGDPg	FDI	FDIg	REM	REMg	GCF	GCFg	EXCH
1981	275.64	0	0.11	0	0.03	0	0.6	0	0.61
1982	256.88	-0.0681	0.12	0.0909	0.03	0	0.63	0.05	0.67
1983	228.82	-0.1093	0.13	0.0833	0.03	0	0.66	0.0476	0.72
1984	226.27	-0.0111	0.14	0.0769	0.03	0	0.69	0.0455	0.76
1985	239.65	0.0593	0.15	0.0714	0.04	0.3333	0.72	0.0435	0.89
1986	239.79	0.0006	0.16	0.0667	0.04	0	0.75	0.0417	2.02
1987	247.47	0.032	0.17	0.0625	0.04	0	0.78	0.04	4.02
1988	265.62	0.0734	0.17	0	0.04	0	0.81	0.0385	4.54
1989	270.71	0.0192	0.19	0.1176	0.04	0	0.84	0.037	7.39
1990	302.6	0.1179	0.2	0.0526	0.05	0.25	0.87	0.0357	7.39
1991	303.68	0.0036	7.7	37.5	1.76	34.2	33	37.93	8.04
1992	317.74	0.0463	8.14	0.0571	1.98	0.125	34.1	0.0333	9.91
1993	311.28	-0.0204	8.58	0.0546	2.2	0.1111	35.2	0.032	17.3
1994	305.63	-0.0181	8.8	0.0258	2.31	0.05	36.3	0.0307	22.33
1995	305.41	-0.0007	9.02	0.025	2.42	0.0476	37.4	0.03	21.89
1996	318.22	0.0419	9.24	0.0244	2.53	0.0455	38.5	0.0294	21.89
1997	327.57	0.0293	9.46	0.0245	2.64	0.0435	39.6	0.0286	21.89
1998	336.02	0.0258	9.68	0.0238	2.86	0.0833	40.7	0.0278	21.89
1999	337.99	0.0059	9.9	0.0227	3.08	0.0769	41.8	0.0267	21.89
2000	354.94	0.0501	10.56	0.0667	3.3	0.0714	44	0.0527	85.98
2001	375.94	0.0591	60	4.6818	24	6.2727	264	5.999	102.5
2002	433.57	0.1532	63.6	0.06	30	0.25	288	0.0909	111
2003	465.43	0.0735	67.2	0.0566	36	0.2	312	0.0833	120.5
2004	508.48	0.0925	72	0.0714	42	0.1667	336	0.0769	128.5
2005	541.22	0.0643	78	0.0833	48	0.1429	360	0.0714	134
2006	574.02	0.0606	84	0.0769	54	0.125	384	0.0667	130.2
2007	611.85	0.0661	90	0.0714	60	0.1111	408	0.0625	122.5
2008	653.24	0.0676	96	0.0667	66	0.1	432	0.0588	117.8
2009	705.74	0.0803	102	0.0625	72	0.0909	456	0.0556	158
2010	762.24	0.08	108	0.0588	78	0.0833	480	0.0526	151.5
2011	802.7	0.0531	342	2.1667	252	2.2308	1,512.00	2.15	158.1
2012	836.65	0.0423	360	0.0526	270	0.0714	1,584.00	0.0476	158.3
2013	892.47	0.0666	378	0.05	288	0.0667	1,656.00	0.0455	158
2014	948.78	0.0631	396	0.0476	306	0.0625	1,728.00	0.0435	184.5
2015	973.95	0.0265	414	0.0455	324	0.0588	1,800.00	0.0417	249.5
2016	958.2	-0.0162	432	0.0435	342	0.0556	1,872.00	0.04	439.5
2017	966.01	0.0082	450	0.0417	360	0.0526	1,944.00	0.0387	305.8
2018	984.63	0.0193	468	0.04	378	0.05	2,016.00	0.037	360
2019	1,006.24	0.0219	486	0.0385	396	0.0476	2,088.00	0.0357	305
2020	1,006.24	0	504	0.037	414	0.0455	2,160.00	0.0345	361
2021	1,006.24	0	522	0.0357	432	0.0435	2,232.00	0.0333	399
2022	1,006.24	0	540	0.0345	450	0.0417	2,304.00	0.0321	423

2023	1,006.24	0	558	0.0333	468	0.04	2,376.00	0.0313	425