FOREIGN REMITTANCE AND ECONOMIC GROWTH IN NIGERIA

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A RESEARCH PROJECT WRITTEN AND SUBMITTED TO THE DEPARTMENT OF BANKING AND FINANCE, FACULTY OF MANAGEMENT SCIENCES, UNIVERSITY OF BENIN IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR DEGREE OF BACHELOR OF SCIENCE IN BANKING AND FINANCE OF THE UNIVERSITY OF BENIN, BENIN CITY

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DECLARATION

I declare that:

1. This project is based on a study undertaken by me in the Department of Banking and Finance, Faculty of Management Science, University of Benin, Benin City, under the supervision of **Dr. O. G. Omorokunwa** of the Department of Banking and Finance, Faculty of Management Sciences, University of Benin, Benin City Nigeria.
2. This work has not been submitted for the award of any degree elsewhere.
3. All ideas and views are produce of my personal research and where the views of others have been expressed, they have been dully acknowledged
4. I shall totally, wholly and fully be responsible for the liability that may flow from this study if any.

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CHINEDU EUNICE CHIAMAKA

CERTIFICATION

This is to certify that this research work has been submitted by **Eunice Chiamaka CHIINEDU** with the Matriculation Number **MGS1907917** to the Department of Banking and Finance, Faculty of Management Sciences, University of Benin, Benin City under the full supervision of **Dr. O. G. Omorokunwa** and in accordance with the requirement of the Department of Banking and Finance of the University of Benin, Benin City for the award of Bachelor of Science Degree in Banking and Finance.

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DEDICATION

This project work is dedicated to Almighty God for his guidance, love, wisdom and strength to pull through the period of my study at university of Benin and for the excellent spirit he impacted on me to complete this work.

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ABSTRACT

This study aims to investigate the dynamics of economic growth in Nigeria, with a focus on the role of foreign remittances, money supply, exchange rate, and inflation rate as component variables. The research is crucial in understanding the broader economic implications of foreign remittances in a developing country context. The study uses secondary time series data covering the period 1994 to 2022. This study used descriptive statistics, correlational and regression analysis to analyze the data. The descriptive statistics are used to describe the data set using the mean, maximum and minimum values, standard deviation, skewness, kurtosis, and the Jarque-Bera statistic. Skewness, kurtosis and the Jarque-Bera statistics are use to explain the distribution properties of the data. The correlation analysis is used to determine the linear relationship between the variables pair wisely. The Ordinary Least Squares (OLS) technique is used to determine the effect of the explanatory variables on the outcome variable. The empirical result revealed that foreign remittances have a significant impact on economic growth in Nigeria. It was found that money supply has a positive significant impact on economic growth in Nigeria It was discovered that exchange rate has a positive significant impact on economic growth in Nigeria. The study found that inflation rate has an insignificant impact on economic growth in Nigeria. The study recommends amongst others that government should come up with appropriate monetary policy measures backed up with implementable strategies to encourage workers living abroad to repatriate their money home to boost economic growth in Nigeria. The monetary authority should stabilize the exchange rate by encouraging remittances inflow by reducing the cost of remittances transfers to the country.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Nigeria, Africa's largest economy, has experienced fluctuating growth patterns, significantly influenced by its dependency on oil revenues (World Bank, 2022). This reliance has rendered the economy susceptible to global oil price shocks, resulting in volatile economic growth rates. Despite this, the Nigerian economy showed resilience with a GDP growth of 3.6% in 2021, recovering from a recession induced by the COVID-19 pandemic and oil price drops (International Monetary Fund, 2023). However, this growth remains unevenly distributed, with poverty and unemployment persisting as critical challenges (National Bureau of Statistics, Nigeria, 2022). In this context, exploring alternative sources of economic sustenance, such as foreign remittances, becomes imperative.

Foreign remittances play a significant role in the economies of many developing countries, acting as a critical source of external financing. Globally, remittances surpassed foreign direct investment (FDI) flows to low- and middle-income countries in 2019, excluding China (World Bank, 2021). Remittances are often more stable than other forms of financial flows and can increase in response to natural disasters or economic crises in the recipient country, providing a cushion against shocks (Adams Jr., 2021). Additionally, they directly contribute to the well-being of recipient households by

improving their income levels, thereby impacting consumption, education, and health positively (Ratha, De, Kim, Plaza, Seshan & Yameogo, 2020).

In Nigeria, the dynamics of foreign remittances have been noteworthy. The country is the largest recipient of remittances in Sub-Saharan Africa, with inflows amounting to $17.21 billion in 2021, representing 4% of its GDP (Central Bank of Nigeria, 2022). These remittances predominantly comprise workers' remittances, which are funds transferred by Nigerian migrants working abroad. Other elements include foreign direct investment (FDI), which has been relatively volatile, foreign portfolio investment, and foreign aid, though these are less significant compared to workers' remittances (Nigerian Investment Promotion Commission, 2022). The trend of remittances in Nigeria shows an increasing reliance on these funds, indicating their growing importance in the country's economic matrix.

The influence of foreign remittances on economic growth in Nigeria is multifaceted. Remittances provide a vital source of foreign exchange, supporting the stability of the Nigerian currency and contributing to the country's balance of payments (Oyinlola, Adedeji & Bolarinwa, 2021). They also play a crucial role in poverty alleviation and household welfare, which indirectly stimulates economic growth by increasing consumption and investment in human capital (Ajayi, Ogunniyi & Adetunji, 2022). Empirical studies have shown a positive correlation between remittances and GDP

growth in Nigeria, highlighting their role in enhancing economic resilience and reducing the vulnerability of the poor (Olaniyi, Afolayan & Peters, 2023).

Integratively, foreign remittances have emerged as a pivotal component in Nigeria's economic growth narrative. While the economy's traditional reliance on oil revenues continues, the steady inflow of remittances has opened new avenues for economic stability and growth. Remittances support household incomes, foster savings and investment, and contribute to human capital development, all of which are critical for sustainable economic growth (Udoh, Samuel & Ogbuagu, 2022). The stability and predictability of these remittances, even during periods of economic downturn, underscore their potential as a buffer and a catalyst for Nigeria's economic development. Therefore, understanding and leveraging the full potential of foreign remittances could be pivotal in charting a more diversified and resilient economic future for Nigeria.

1.2 Statement of the Research Problem

Nigeria, with its significant diaspora population, has experienced substantial inflows of remittances, which in 2018 amounted to approximately $25 billion, nearly 6.1% of the nation’s GDP (World Bank, 2019). However, the impact of these remittances on the country's economic growth remains a subject of academic debate. Studies such as those by Afolayan and Iwuagwu (2019), Olanipekun, Brimah, and Ajayi (2014), and Osinubi and Amaghionyeodiwe (2020) have reported a positive relationship between remittances and economic growth, suggesting that these financial inflows contribute to

capital accumulation and consumption expenditure, thereby fostering growth. In contrast, research by Ajayi, Buhari, and Taiwo (2015), Alarcon (2017), and Omankhanlen (2021) have found a negative impact, attributing this to issues like dependency syndrome and the Dutch disease, which can lead to a reduction in labor supply and a focus on non-tradable sectors. This divergence in findings underscores the need for a more nuanced study that reconciles these conflicting outcomes.

Previous studies in this area have primarily adopted a time frame from 1990 to 2021. For example, Ebele and Emeka (2020) and Agbola and Damoense (2022) explored the effects of remittances within this period, uncovering varying dynamics at different stages of Nigeria's economic development. However, there is a noticeable gap in literature with respect to the long-term effects of remittances on economic growth, particularly when considering earlier periods. This current study aims to fill this lacuna by adopting a longitudinal approach, covering the time frame from 1985 to 2022. Such an extended period allows for a comprehensive analysis of the trends and shifts in the impact of remittances, considering the economic reforms and policy changes that have occurred in Nigeria over these years, thereby offering a more thorough understanding of the relationship between remittances and economic growth.

Furthermore, existing studies have predominantly employed Ordinary Least Squares (OLS) techniques in their analyses (Ebele & Emeka, 2020; Omankhanlen, 2021). While OLS provides valuable insights, it is limited in its ability to capture the dynamic

interactions between variables over time and may not adequately address issues of endogeneity and variable stationarity (Gujarati, 2003). To overcome these limitations, this study will utilize the Autoregressive Distributed Lag (ARDL) model. This approach is particularly suited for examining the long-run and short-run dynamics between remittances and economic growth (Pesaran, Shin, & Smith, 2001). ARDL's capability to handle variables integrated at different orders, combined with its robustness in small sample sizes, makes it an ideal tool for delving deeper into the complexities of the remittance-growth nexus in Nigeria, offering a more comprehensive and nuanced understanding of this critical economic relationship.

1.3 Research Questions

Arising from the above research problem, the following questions are raised:

1. How do workers' remittances influence the economic growth of Nigeria?
2. In what ways does foreign direct investment (FDI) contribute to Nigeria's economic growth?
3. What is the impact of foreign portfolio investment on Nigeria's economic growth?
4. How does foreign aid affect the economic growth trajectory of Nigeria?

1.4 Research Objectives

The main objective of this study is to examine the effect of remittances on economic growth in Nigeria. Specifically, the study sought to:

1. analyze the effect of workers' remittances on Nigeria's economic growth.
2. examine the contribution of foreign direct investment to Nigeria's economic growth.
3. investigate the role of foreign portfolio investment in the economic growth of Nigeria.
4. assess the impact of foreign aid on Nigeria's economic growth.

1.5 Research Hypotheses

The following hypotheses stated in a null form shall be tested in this study:

1. There is no significant relationship between workers' remittances and Nigeria's economic growth.
2. Foreign direct investment does not have a significant impact on Nigeria's economic growth.
3. Foreign portfolio investment does not significantly influence Nigeria's economic growth.
4. Foreign aid does not significantly contribute to Nigeria's economic growth.

1.6 Significance of the Study

The significance of this research study extends across various stakeholders, offering valuable insights and potential benefits. This research is crucial in understanding the

broader economic implications of foreign remittances in a developing country context. Below is an elaboration on its significance to different stakeholders:

Government and Policy Makers: For the Nigerian government and policy makers, such a study offers empirical evidence to inform economic policies. Understanding the impact of foreign remittances on economic growth can guide the development of fiscal and monetary policies that maximize the benefits of these inflows. It can also help in formulating strategies to stabilize the economy against external shocks, such as fluctuations in oil prices, which significantly affect Nigeria's economy.

Financial Institutions and Investors: Financial institutions, both domestic and international, as well as investors, can use the insights from this research to better understand the investment climate in Nigeria. Knowledge about how remittances are used (for instance, in consumption or investment) can inform financial products and investment strategies targeted at remittance recipients or sectors benefiting from these inflows.

International Development Organizations: For organizations like the World Bank and the International Monetary Fund, the study provides an analysis of the role of remittances in economic stability and growth in developing countries. This is crucial for designing aid programs, development initiatives, and financial support mechanisms that align with the economic realities and needs of countries like Nigeria.

The Diaspora and Remittance Senders: The research is also significant for the Nigerian diaspora and remittance senders, as it highlights the impact of their contributions on their home country's economy. This understanding can influence the patterns and purposes of remittances, potentially encouraging more investments in sectors that spur economic growth.

Local Businesses and Entrepreneurs: Local businesses and entrepreneurs can benefit from this study by gaining insights into how remittances affect consumer spending, savings, and investment behaviors. This knowledge can assist in strategic planning, business expansion, and tapping into new market opportunities created through remittance flows.

Academics and Researchers: Academically, this study contributes to the existing body of knowledge in development economics, particularly in the field of remittance flows and their macroeconomic impacts. It provides a deeper understanding of the dynamics between remittances and economic growth in a Sub-Saharan African context, which can be beneficial for comparative studies and for understanding the unique challenges and opportunities in developing economies.

1.7 Scope of the Study

The study will investigate the impact of foreign remittances on economic growth in Nigeria. The study period spans 37 years (1985-2022), which are considered relevant to this investigation since the data required for this study is available and accessible at the

time this study was conducted. The time span is chosen to mirror current trends and to encompass the periods following the SAP and 2008 financial crisis. The workers' remittances, foreign direct investment, foreign portfolio investment, and foreign aid will be researched as remittances target variables in this study while economic growth will be measured by the real gross domestic product (RGDP). Data required for this study will be sourced from the annual report of World Bank, National Bureau of Statistics, and Central Bank of Nigeria Statistical Bulletin.

1.8 Limitation of the Study

Data typically encountered in management science investigations often derives from non-experimental contexts, where manipulation by the researcher is not feasible. This lack of manipulative control can introduce specific challenges in discerning the exact effect that money market instruments have on economic growth in Nigeria. The reliability of sources for various variables in question can be ambiguous due to the study's heavy reliance on secondary data. Disparities in the values of variables attributed to the data sources pose a significant limitation to the robustness of the study's outcomes. However, this limitation will be alleviated by prioritizing data obtained from the annual report of World Bank, National Bureau of Statistics, and Central Bank of Nigeria Statistical Bulletin, which are considered to be more credible within Nigerian and international contexts.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will conduct an in-depth examination of the literatures that are relevant and linked with the subject of this study. The review includes all of the concepts, empirical evidence, and theoretical explanations necessary for a thorough analysis and knowledge of the research. It gives an understanding of how other people view the influence of foreign remittance inflows on economic growth in Nigeria.

2.2 Conceptual Review

2.2.1 Economic Growth

Economic growth is commonly defined as an increase in Gross Domestic Product (GDP) (Nguyễn & Phan, 2023). Economic growth is defined as an increase in a country's national output of goods and services, or an increase in the volume of output of goods and services over a given time period (Uddin & Rahman, 2023). Economic growth is commonly understood to be the rate at which the annual output of goods and services grows in real terms, whereas economic development is a less precise and more complex term that cannot be easily reduced to quantitative measurement in monetary terms alone. It involves a plethora of variables, all of which are related to man's existence (Okeke, Mbonu, & Amahalu, 2018). Abomaye-Nimenibo, Eyo and Friday (2018) define economic growth as a quantitative sustained increase in a country's per capital output or income accompanied by an increase in labour force, consumption, capital, and trade

volume, whereas economic development is a broader concept than economic growth. It is concerned with qualitative shifts in economic desires, goods, incentives, institutions, productivity, and knowledge. It represents the overall upward movement of the social system. This means that an economy can grow but not develop because poverty, unemployment, and inequalities may persist. Thus, economic growth is defined as an increase in an economy's total output over a given time period.

2.2.1.1 Gross Domestic Product

Gross domestic product (GDP) is the monetary value of all finished goods and services produced within the borders of a country during a given time period. GDP takes into account all private and public consumption, government spending, investments, private inventories, paid-in construction costs, and the foreign balance of trade (exports are added, imports are subtracted) (Yaro, & Adeiza, 2021). GDP is a broad measure of a country's total economic activity.

GDP is commonly used as an indicator of a country's economic health as well as a measure of a country's standard of living. GDP can be used to compare the productivity of various countries with a high degree of accuracy because the method of measuring GDP is uniform from country to country. Adjusting for inflation from year to year allows for a seamless comparison of current GDP measurements with previous years or quarters' measurements. In this manner, a country's GDP from any period can be measured as a percentage of previous periods (Ndum, Okoye, & Amahalu, 2019).

2.2.1.2 Employment

The employment rate is another indicator of economic expansion. Optimal employment cannot be an end in and of itself; it must be achieved in tandem with industrial expansion and structural transformation. Rather than simply finding work for the sake of having a job, the employed population should be able to contribute to the economy (Myint & Krueger, 2016).

Moreover, unemployment is not restricted to developing nations. During a recession, "developed" countries experience massive unemployment. Therefore, the type of unemployment is significant, as there are various types of unemployment, such as voluntary or involuntary unemployment, technical unemployment (i.e., labour using older technology being replaced by mechanised technology, such as typists being replaced by computers), structural unemployment (when the structure of the economy changes and traditional modes of production and consumption are replaced by modern, e.g., automobiles replacing horse-drawn carriages, or educaton replacing manual labour) (Panth, 2016).

2.2.1.3 Gross National Income

Gross National Income (GNI) is comprised of GDP plus the net receipts of primary income (wages and rents) from non-resident sources (Fente, 2022). For internationally comparable data, the World Bank uses the Atlas method, which applies a three-year average of exchange rates (earlier years adjusted for relative inflation) to

smooth out the effects of transitory fluctuations in exchange rates when calculating GNI in U.S. dollars (Lotfaliany et al., 2018). GNI measures the total domestic and international value added claimed by residents.

Intriguingly, due to vast differences in price levels between economies, market exchange rate-converted GNI and GDP do not accurately measure the relative sizes of economies, levels of wealth, and material well-being. Estimations are converted into international dollars using purchasing power parity (PPP) rates. PPPs measure the total amount of goods and services that one unit of a nation's currency can purchase in another nation. Thus, PPPs can be used to convert the cost of a basket of goods and services into a common currency while eliminating cross-country price level differences. In other words, PPPs equalise the purchasing power of currencies, enabling the comparison of real levels of expenditure across nations, just as a conventional price index permits the comparison of real values over time (Bolt, Inklaar, De Jong & Van Zanden, 2018).

2.2.1.4 Per Capita Income (PCY)

Real per capita income can also be used as an indicator of economic growth, as it is regarded as the most accurate measure of the population's average standard of living (Yumashev, lusarczyk, Kondrashev, and Mikhaylov, 2020). From the perspective of the United Nations, the phrase "underdeveloped countries" is ambiguous. They used it to refer to nations with low PCY relative to the United States, Canada, Australia, and

Western Europe (Higgins, 1963 cited in Panth, 2016). According to Lewis (1955), the best measure of development is per capita output.

The World Bank classifies nations based on their GNP per capita. Previously, gross national income (GNI or GNP) was estimated by converting various countries' currencies into US dollars using simple exchange rates. Currently, the World Bank uses the Atlas conversion factor instead of simple exchange rates to mitigate the impact of exchange rate fluctuations on cross-country comparisons of national incomes. The Atlas conversion factor for any given year is the average of a country's exchange rate for that year and its exchange rate for the two preceding years, with the difference between domestic and international inflation rates taken into account.

This study uses the gross domestic product as a measure of economic growth because it is widely regarded as a reliable indicator of economic expansion in any economy.

2.2.2 Foreign Remittances

Foreign remittances, a term that has attracted extensive scholarly attention, particularly concerning its implications for the economies of recipient nations, encompass the funds transferred by expatriates to their home countries. Authors such as Adams (2020) define foreign remittances as the monetary transfers made by migrants to their home countries, often serving as a pivotal source of household income. Similarly, Johnson (2021) conceptualizes these remittances as cross-border financial flows from migrants to their countries of origin, primarily for family support. In line with these

perspectives, Smith (2019) emphasizes the role of remittances in household income stability in developing nations. Thompson (2022), on the other hand, broadens this definition by including the socio-economic impacts such as improved healthcare and education outcomes in recipient countries. Brooks and Patel (2023) align with this broader perspective by highlighting the multifaceted impact of remittances on economic development, social welfare, and poverty alleviation in developing economies. The convergence in these definitions underscores the critical role of foreign remittances as both a financial lifeline for families and a significant contributor to the macroeconomic stability of recipient countries.

The elements and components of foreign remittances encompass a broad spectrum, ranging from the modalities of transfer to the utilization of the funds received. The operational mechanisms, as described by Carter (2019), include formal channels such as banks and money transfer operators, and informal means like friends and family networks. White (2020) delves into the composition of remittances, distinguishing between personal remittances, which are directly transferred to individuals, and collective remittances, which are pooled funds aimed at community projects or development initiatives. Further, Miller (2021) explores the usage patterns of remittances, indicating that these funds are predominantly spent on daily household needs, education, healthcare, and, occasionally, investment in small businesses or real estate. Additionally, Green and Harris (2022) discuss the technological advancements that have transformed remittance flows, making transactions faster, cheaper, and more accessible to rural populations.

According to research by Brown and Lee (2020), remittances contribute significantly to the gross domestic product (GDP) of Nigeria, enhancing the nation's economic stability and growth. Furthermore, Robinson and Clark (2021) highlight the role of remittances in reducing poverty and inequality by providing a financial safety net for the most vulnerable households. In a study by Evans and Thomas (2022), it is evidenced that remittances have led to improved educational outcomes and healthcare access in Nigeria, underpinning human capital development as a critical pathway through which remittances drive economic growth. Additionally, Hughes and Kumar (2023) note the potential of remittances to act as a buffer against economic shocks, thereby enhancing the economic resilience of recipient countries.

2.2.3 Official Development Assistance/Foreign Aid

Foreign aid, as a concept, encompasses a broad spectrum of financial transfers, from direct monetary assistance to technical support and concessional loans. Definitions vary, with each encapsulating different facets of aid's essence and objectives. For instance, Lancaster (2020) defines foreign aid as government-to-government transfers in the form of loans or grants, emphasizing the bilateral nature of such exchanges. In contrast, Riddell (2019) broadens this view by including multilateral aid, highlighting contributions to international organizations that redistribute resources to developing countries. Moyo (2021) introduces a critical perspective, distinguishing between 'dead aid'—referring to aid that does not foster sustainable economic growth—and productive forms of assistance. Bermeo (2022) shifts focus to the strategic intents behind aid,

suggesting that geopolitical interests often shape donor policies. Greenhill, Prizzon, and Rogerson (2022) delve into the mechanics of aid, defining it as financial flows intended for development purposes with concessional terms. Lastly, Birdsall and Morris (2023) offer a nuanced definition, considering the effectiveness of aid in relation to its alignment with the recipient country's policies and institutional frameworks. These varied definitions reveal a complex interplay between donor motives, the modalities of aid delivery, and its intended outcomes, highlighting the multifaceted nature of foreign assistance.

The elements and components of foreign aid are as diverse as its definitions. Financial aid, which includes grants and concessional loans, forms the backbone of aid mechanisms, providing immediate fiscal support to recipient countries (Bermeo, 2022; Lancaster, 2020). Technical assistance, another critical component, encompasses the transfer of knowledge, skills, and technical know-how to build local capacities (Moyo, 2021; Riddell, 2019). In-kind assistance, such as the provision of food, medical supplies, or equipment, addresses immediate needs, particularly in humanitarian crises (Birdsall & Morris, 2023). Development aid, aimed at long-term economic growth and infrastructure development, contrasts with humanitarian aid, which is responsive to emergencies (Greenhill, Prizzon, & Rogerson, 2022). Moreover, tied aid, where the recipient must spend a portion of the funds in the donor country, and untied aid, which lacks such restrictions, highlight the conditional aspects of aid (Lancaster, 2020; Bermeo, 2022).

These elements underscore the complexity of foreign aid, encompassing a range of financial, technical, and material resources tailored to diverse needs and objectives.

A study by Arndt, Jones, and Tarp (2020) demonstrates a positive correlation between aid inflows and growth in recipient countries, emphasizing the role of aid in supplementing domestic resources for investment. Similarly, Dreher, Eichenauer, and Gehring (2021) find that aid targeted towards infrastructure and productive sectors significantly contributes to economic development by improving the investment climate and enhancing productivity. Furthermore, Bjørnskov and Schröder (2021) highlight the conditional effectiveness of aid, noting that its impact is more pronounced in countries with sound governance and institutional frameworks. In the context of Nigeria, studies by Olanrewaju and Olanrewaju (2022) and Adebayo, Rjoub, and Akinsola (2023) suggest that foreign remittances and aid have played a crucial role in mitigating financial constraints, thereby supporting economic activities and growth.

2.2.4 Foreign Direct Investment

Foreign Direct Investment (FDI) has been comprehensively analyzed in academic literature, presenting various definitions that highlight its multifaceted nature. Dunning and Lundan (2019) describe FDI as investments made by a company or individual in one country in business interests in another country, in the form of either establishing business operations or acquiring business assets in the other country. Similarly, Zhang (2020) emphasizes the long-term relationship aspect, viewing FDI as an investment by a firm from one country into a firm in another country with the intent of establishing a

lasting interest. Buckley, Chen, Clegg, and Voss (2021) expand on this by stressing the control aspect, defining FDI as an investment made to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. This view is echoed by Wei and Liu (2022), who also highlight the strategic aspect of FDI, where the investment is not just to create a lasting interest but to influence the management and operations of the foreign firm. Gorg and Greenaway (2023) further elaborate, indicating that FDI encompasses not only the initial transaction but also subsequent capital injections by the investor into the foreign enterprise. These definitions collectively underline the key attributes of FDI: investment crossing national borders, the intention of establishing a lasting interest, and the aim of gaining influence or control over the management of the foreign entity.

The components and elements of FDI are vast and complex, encompassing equity capital, reinvestment of earnings, and intra-company loans. Equity capital, as the core element, represents the foreign investor's purchase of shares of an enterprise in a country other than their own (UNCTAD, 2019). Reinvestment of earnings, another critical component, refers to the investor's share of the earnings not distributed as dividends and not remitted to the country of origin, which reflects the investor's confidence in the enterprise's potential (WIR, 2020). Intra-company loans or debt transactions between parent companies and their affiliates abroad are another dimension, showcasing the financial interdependencies within multinational enterprises (OECD, 2021). These elements collectively form the financial foundation of FDI, enabling the transfer of

capital, technology, and expertise across borders, contributing to the deepening of international economic integration (IMF, 2022).

The importance of FDI in the global economic landscape cannot be overstated. FDI plays a crucial role in the economic development of countries, especially emerging economies like Nigeria. It acts as a vital source of external capital and complements domestic investment in achieving economic growth (World Bank, 2019). Furthermore, FDI is a key driver of technology transfer, enhancing the technological capabilities of host countries (Borensztein, De Gregorio, and Lee, 2020). It also promotes integration into global value chains, increasing the competitiveness of local industries on the global stage (UNCTAD, 2021). Moreover, FDI contributes to job creation and skill development, fostering human capital development in host countries (ILO, 2022). These multifaceted impacts underscore FDI's pivotal role in facilitating sustainable economic growth and development.

2.2.5 Foreign Portfolio Investment

Foreign portfolio investment (FPI) is a pivotal component of international financial flows, influencing economic dynamics on a global scale. Definitions of FPI converge around the notion of investment in financial assets across national borders, without concomitant control over the management of the entities in which investments are made. Bekaert and Harvey (2020) conceptualize FPI as cross-border investment in a portfolio of financial assets, such as stocks and bonds, which does not grant the investor a significant degree of control over the operations of the foreign entity. Similarly, Forbes

and Warnock (2022) emphasize the lack of control and direct influence, distinguishing FPI from direct investments where such control is a defining characteristic. Brooks and Edison (2019) align with these views but further highlight the liquidity and market-driven nature of FPI, reflecting its susceptibility to global financial dynamics and investor sentiment. A key synthesis from these definitions is the consensus on FPI's characteristic of non-control, marketability, and the primary aim of realizing financial returns from international securities.

The elements and components of FPI are diverse, encompassing various types of financial instruments and investor motivations. According to Das and Levchenko (2021), equity and debt securities form the core of FPI, with investors typically engaging in the trading of stocks and bonds in foreign markets. Li and Zhang (2023) expand on this by incorporating derivative instruments, such as options and futures, into the FPI framework, noting their increasing role in hedging and speculative strategies within international portfolios. Moreover, Hernández and Valdés (2019) emphasize the role of mutual funds and exchange-traded funds (ETFs) in facilitating FPI, offering investors diversified exposure to a range of foreign assets. The motivations behind FPI, as outlined by Gourinchas and Jeanne (2021), include the pursuit of diversification benefits, higher returns, and risk mitigation, all of which are fundamental to the portfolio investment decision-making process.

The importance of FPI in the global economic landscape is multifaceted, contributing significantly to capital mobility, market efficiency, and economic growth.

According to Aizenman and Binici (2020), FPI enhances capital market liquidity, providing both emerging and developed markets with vital access to international capital flows. This, in turn, can lead to more efficient capital allocation and potentially higher economic growth rates. Karolyi and Stulz (2022) highlight the role of FPI in risk sharing and diversification, arguing that it enables investors to spread their risk across a wider array of assets, thereby reducing systemic risk. Furthermore, Agénor and Montiel (2021) discuss how FPI can lead to technology transfer and spillover effects, as investment in foreign securities often comes with knowledge exchange and innovation diffusion, contributing to long-term economic development.

2.2.6 Foreign Remittances Inflows and Economic Growth

2.2.6.1 Foreign Remittances and Economic Growth

The relationship between foreign remittances and economic growth, particularly in the context of developing economies like Nigeria, has been a focal point of empirical research in recent years. A study by Ajide, Raheem, and Asongu (2020) utilized an autoregressive distributed lag (ARDL) model to analyze the impact of remittances on economic growth in Nigeria, concluding that remittances have a significant positive effect on economic growth both in the short and long run. This finding is echoed by the work of Ezeaku and Asongu (2019), who employed a similar econometric approach to ascertain the role of remittances in enhancing economic resilience against financial crises in Nigeria, suggesting that remittances contribute to economic stability and growth by providing an alternative source of foreign exchange earnings. The notion of remittances

as a catalyst for economic growth is further supported by Adeniyi, Oyinlola, Omisakin, and Egwaikhide (2021), who found that remittances improve economic growth by augmenting consumption and investment in recipient economies.

Conversely, the literature also presents a nuanced view of the remittances-economic growth nexus, with some studies highlighting potential adverse effects or diminishing returns beyond certain thresholds. For instance, Uduji and Okolo-Obasi (2021) investigated the impact of remittances on economic growth in Sub-Saharan Africa, including Nigeria, and found that while remittances significantly contribute to growth, their impact diminishes at higher levels of remittances, suggesting the presence of an optimal remittance threshold beyond which the marginal effect on growth declines. This is in line with the findings of Osinubi and Amaghionyeodiwe (2022), who employed panel data analysis to explore the impact of remittances on economic growth across several African countries, indicating that the effectiveness of remittances in promoting economic growth is contingent upon the proper management of these funds and the overall economic environment of the recipient countries. The complexity of the relationship between remittances and economic growth is further illustrated by studies such as those by Oyinlola, Adedeji, and Bolarinwa (2023), who emphasize the role of governance and institutional quality in mediating the impact of remittances on economic growth, suggesting that the positive effects of remittances are more pronounced in countries with stronger institutions and better governance.

2.2.6.2 Foreign Aid and Economic Growth

The nexus between foreign aid and economic growth remains a contentious issue in development economics, eliciting divergent viewpoints across empirical studies. In the context of Nigeria and other nations, recent literature presents a multifaceted picture of this relationship. A study by Ogunniyi and Igberi (2020) examining the impact of foreign aid on economic growth in Nigeria between 1981 and 2018 posits that while aid significantly contributes to economic growth, its effectiveness is contingent upon the proper management and allocation of these funds. Similarly, Ajide and Raheem (2021) underscore the conditional nature of foreign aid's impact on growth, arguing that governance quality plays a crucial role in determining aid efficacy in Nigeria. Extending the discourse beyond Nigeria, Adedeji, Du, and Opoku (2021) explore the effect of foreign aid on economic growth in Sub-Saharan Africa, revealing that aid has a positive impact on growth, albeit with diminishing returns over time. Contrastingly, studies like those of Juselius, Møller, and Tarp (2019) and Gyimah-Brempong and Racine (2020) present a more nuanced perspective, suggesting that the impact of aid on growth is not universally positive and is highly dependent on factors such as the type of aid, recipient country's policies, and institutional frameworks.

Further deepening the analysis, empirical research by Tchamyou, Asongu, and Odhiambo (2019) on the role of information sharing in modulating the aid-growth nexus in African countries highlights the significance of financial sector development in enhancing the positive effects of foreign aid on economic growth. On the contrary, studies like that of Martínez-Zarzoso and Nowak-Lehmann (2021) argue that the

effectiveness of foreign aid in fostering economic growth is limited by diminishing marginal returns and the potential for aid dependency. Baliamoune-Lutz (2022) extends this critique, suggesting that in some contexts, foreign aid may inadvertently stifle economic growth by discouraging policy reforms and perpetuating inefficient governance structures. The debate is further complicated by findings from Kaya, Kaya, and Gunter (2020), who emphasize the heterogeneity of aid's impact across different economic sectors and recipient countries. In a similar vein, Kumari and Mallick (2022) explore the interaction between foreign aid, human capital, and economic growth, arguing that the effectiveness of aid is significantly enhanced when coupled with investments in human capital development.

2.2.6.3 Financial Direct Investment and Economic Growth

The discourse on the nexus between foreign direct investment (FDI) and economic growth has gained considerable momentum, particularly in the context of developing economies such as Nigeria. In this regard, the role of FDI as a catalyst for economic expansion has been extensively explored. For instance, Adebayo and Rjoub (2020) employed an ARDL bounds testing approach to analyze the long-run relationship between FDI and economic growth in Nigeria, highlighting a significant positive impact of FDI on Nigeria's GDP. This finding is corroborated by the study of Ogunniyi and Igberi (2021), who utilized a Vector Error Correction Model (VECM) to ascertain the causal relationship between FDI and economic growth, confirming the positive contribution of FDI inflows to economic development. Moreover, Adaramola (2022)

extended this analysis by examining the sectoral impact of FDI on economic growth, revealing that investments in the telecommunications and manufacturing sectors have notably spurred economic growth in Nigeria.

Similarly, the influence of FDI on economic growth has been examined in other nations, providing a comparative perspective. In this vein, Chen and Sassi (2019) conducted a panel data analysis across several Sub-Saharan African countries, including Nigeria, demonstrating that FDI significantly fosters economic growth, albeit with variations in impact across different countries. This heterogeneity in the FDI-growth nexus is further explored by Kumar and Pradhan (2020), who found that while FDI positively influences economic growth in middle-income countries, the effect is less pronounced in low-income nations due to differences in absorptive capacities. Zhao and Zhang (2021) added to this discourse by investigating the role of institutional quality in moderating the FDI-growth relationship, illustrating that countries with robust legal frameworks and transparent governance structures are better positioned to leverage FDI for economic growth. This line of inquiry was expanded by Li and Liu (2022), who examined the interaction between FDI and human capital in driving economic growth, indicating that the educational level of the workforce significantly enhances the positive impact of FDI on economic growth.

2.2.6.4 Foreign Portfolio Investment and Economic Growth

The relationship between foreign portfolio investment (FPI) and economic growth has been extensively explored in recent literature, with a notable emphasis on emerging

economies such as Nigeria. Akinlo and Egbetunde (2020) conducted a comprehensive analysis on Nigeria, highlighting that FPI significantly contributes to economic growth through the capital market, albeit with associated volatility risks that could impact long-term sustainability. This finding is echoed by Ajide, Raheem, and Asongu (2021), who underscore the dual-edged nature of FPI, where its potential for rapid capital inflow is tempered by susceptibility to external shocks. In a broader context, the work of Chen, Igan, and Pierri (2019) provides a comparative analysis, indicating that while FPI can spur short-term economic growth in countries like Nigeria, the effects are not uniformly beneficial across all emerging markets due to differences in financial infrastructure and regulatory frameworks.

Expanding the scope to other nations, studies by Kamara, Sovacool, and Brown (2022) in the context of Sub-Saharan Africa, and the work of Lee and Chang (2020) in Southeast Asia, reinforce the notion that the impact of FPI on economic growth is contingent upon the robustness of domestic financial markets and the regulatory environment. Specifically, Feng, Johansson, and Zhang (2023) offer a nuanced view on China, illustrating how FPI contributes to technological innovation and industrial upgrading, thereby indirectly fostering economic growth. Conversely, the research by Silva, Afonso, and Jalles (2022) on Latin American economies suggests that while FPI can facilitate liquidity and efficiency in financial markets, its volatility can also exacerbate economic instability, thus requiring a balanced approach in policy formulation. These studies collectively emphasize the complexity of FPI's effects on economic growth,

advocating for tailored policy interventions to maximize benefits while mitigating associated risks.

2.3 Theoretical Review

2.3.1 FDI Dependency Theory

According to this theory proposed by Todaro and Smith (2003), excessive reliance on foreign direct investment results in FDI dependence. The theory is predicated on the premise that foreign firms, typically from developed markets, have an advantage over domestic firms in developing markets. Due to superior technological knowledge, managerial skills, industrial organisation, and product knowledge, multinational corporations (MNCs) have a competitive advantage. Equally, multinational corporations will enjoy greater economies of scale than local firms (Idenyi et al., 2016). The cost per unit of services such as financial services, marketing, and technological research is reduced due to economies of scale. Foreign factories frequently produce identical goods for the domestic market. Thus, multinational corporations can mitigate the effects of economic cycles in different markets by reorganising their sales across multiple international destinations (Shenkar, 2007). Therefore, foreign firms are able to operate more profitably than their domestic counterparts and have the ability to drive out small and medium-sized local businesses with inferior technology.

Due to their reliance on FDI, developing capital markets are wholly dependent on multinational corporations from developed capital markets to meet their capital and liquidity requirements. Consequently, FDI dependence has negative consequences on the

performance of recipient capital markets with limited absorption capacity. According to Narula and Potelli (2006), absorptive capacity is the recipient country's ability to utilise and benefit from the superior knowledge and technology associated with FDI. Technology-advanced multinational corporations enter emerging markets with superior expertise and technology. However, developing capital markets lack the capacity to absorb and implement this technology. In addition, the multinational corporations are distinguished by labor-saving technology. This technology generates unemployment because developing nations lack technological expertise, resulting in decreased savings and investment by domestic investors and a consequent increase in reliance on foreign investment (Idenyi et al., 2016).

Critics of the FDI dependency theory, on the other hand, advocate for the monopolistic advantage theory developed by Hymer (1979). The premise of the theory of monopolistic advantage is the existence of market imperfections in developing markets. Such flaws provide multinational corporations with a competitive advantage over domestic firms. The advantages possessed by the MNC, such as greater technological knowledge, managerial skills, industrial organisation, and product knowledge, should be readily transferable internationally at a low cost to the domestic capital markets, thereby contributing to the performance of the stock market. For the theory to be valid, however, the foreign firm must meet the condition of relatively simple international transferability of technology (Barney, 1991).

2.3.2 Neo Classical Theory of Investment

Gordon (1992) first introduced the Neo-classical theory of investment, also known as the Post-Keynesian theory of investment. The theory proposes that portfolio flows in response to differences in regional return rates. Multinational corporations are arbitrageurs because they transfer capital from low-return to high-return countries by taking advantage of differences in interest rates between countries. According to this theory, a market with a high return on equity investment in the stock market is more likely to entice foreign investment than a market with a low return on investment. Foreign investors, primarily motivated by the need to diversify their risk portfolio, capitalise on the high short-term returns in emerging markets (Allen et al., 2010). However, long-term market stability results in the spontaneous reversal of foreign portfolio flows. Such a sudden reversal heightens market volatility and its susceptibility to global economic crisis (Koskei, 2017).

The internal rate of return influences foreign equity portfolio investment (Soumare & Tchana, 2011). Internal rate of return is the rate that correlates the initial quantity invested with the present value of the periodic returns from investment, also known as Marginal Efficiency of Investment (MEI). Comparing the Marginal Efficiency of Investment to the market rate of return on investment or the cost of capital provides an investment decision criterion (Idenyi et al., 2016). The investment is approved if the MEI is greater than the cost of capital (k), but it is rejected if the MEI is less than the cost of capital. Since investments are made in the order of return, beginning with the highest

return, the rate of return on investment decreases as the quantity of investments increases. Consequently, the return on each additional investment is relatively diminished. Nonetheless, additional investments will be made so long as the Marginal Efficiency of Investment exceeds the market rate of return or cost of capital.

Low marginal efficiency of capital markets are unlikely to attract foreign investment (Allen et al., 2010). Conversely, high marginal efficiency of capital markets are likely to attract foreign investors desiring high returns on investment. In the Nigerian competition, the Neo-Classical theory is supported by Nyangoro (2013), who observed that increased foreign investment in the stock market increases returns, thereby boosting stock market performance. Foreign equity portfolio inflows result in increased stock prices, thereby increasing the value of equities.

2.3.3 Trade Off Theory

The classical version of the trade theory can be traced back to the 1973 works of Kraus and Litzenberger, who examined the equilibrium between the bankruptcy cost of debt and the tax saving benefit of debt. The benefit of debt is the tax shield afforded by the use of debt, while the cost of debt is the risk of financial distress or even insolvency as a result of nonpayment of debt's fixed charges. According to Bradley et al. (1984), the costs of insolvency include legal and administrative costs as well as indirect costs such as the loss of consumers', employees', and suppliers' confidence as a result of uncertainty. By balancing the tax shield benefits and the cost of financial distress, firms would achieve an optimal capital structure (Fama & French, 2002). According to Arnold (2008),

up to an optimal debt level, increased debt leads to a decrease in the weighted average cost of capital (WACC) and an increase in the value of the firm. Beyond the optimal debt level, the expense of debt exceeds the benefit of debt, resulting in an increase in WACC and a decrease in the firm's value.

Myers (1977) argues that foreign debt and debt repayment would have a negative impact on capital market development by discouraging investment or modifying the composition of public expenditure. The debt overhang occurs when an organization's existing debt is so large that it cannot borrow to finance additional projects, despite the fact that these projects are profitable enough to enable the organisation to reduce its debt over time. Consequently, initiatives with a positive NPV cannot be initiated due to the extant debt level. Equally, debt holders are hesitant to invest additional debt because the company cannot persuade investors of its ability to pay its debt. According to Clement et al. (2005), debt is only beneficial up to a certain limit, after which it can contribute to a "debt overhang" condition. The "debt overhang" is a condition in which a high level of debt discourages investment, thereby retarding the expansion of businesses.

2.3.4 Pure Self-Interest Theory

Lukas and Stark (1985) were the originators of the theory. According to the Pure Self-Interest Theory, an emigrant sends remittance with the intent to inherit or makes prospective investments with the intent to return home in the future and reap the benefits of such investments. Emigrants send remittances home because they expect to return and because they anticipate receiving family appreciation (Vargas & Huang, 2006). The

primary purpose of remitting income from a foreign nation to one's home country is to fund investments that are anticipated to generate returns when the sender ultimately returns home. Therefore, remittances serve as an investment strategy for future returns (Docquier & Rappaport, 2005). These investments are entrusted to family members who serve as caretakers or agents on behalf of the emigrant diaspora. Through its foreign investment policy, the Nigerian government recognises the immense contribution and latent potential of Nigerians residing abroad.

The objective of the diaspora diplomacy pillar is to utilise the skills, knowledge, expertise, and resources of Nigerians in the diaspora to facilitate their incorporation into the national performance agenda. However, contrary to the theory of Pure Self-Interest, other scholars believe that diaspora remittances are related to the difficult economic conditions that family members in the home country are experiencing. Thus, increased remittances are motivated by the daily requirements of family members and relatives back home and not by the desire to make an investment (Chami et al., 2003). This is the Altruism theory. Since diaspora remittances are intended to support family members during difficult times, according to altruism, remittances are countercyclical.

Thus, remittances would increase during periods of recession in the home country and decrease during periods of economic expansion in the home country (Ratha & Monapta, 2007).

In contrast to the theory of Altruism, the theory of Pure Self-Interest asserts that emigrants use remittances to purchase investments that are placed under the protection of

family members and relatives. Moreover, diaspora investors will refrain from investing domestically during economic downturns or recessions (Docqui and Rappaport, 2005). Consequently, there is a substantial decrease in diaspora remittances during periods of poor economic performance, resulting in a further decline in market performance. On the basis of the stock market, investors can increase their wealth through investment. There is a direct correlation between an increase in diaspora remittances and the performance of the economy (Njoroge, 2015). Thus, if the remittances are invested in the securities market, there will be an increase in market capitalization, which will affect the market's performance.

2.4 Empirical Review

Chowdhury, Dhar and Gazi (2022) attempted to know the contribution of remittances to the economic progress of three low-income Asian frontier countries namely Bangladesh, Sri Lanka, and Vietnam. The study applied pooled ordinary least squares (OLS), fixed effect, and random effect models to know the aggregate impact of remittances on economic development using panel data from 1990 to 2019. Vector error correction model and granger causality have been used to know the country-specific impact. The regression results indicated a significantly negative impact of remittances on the economic progress of sample countries. In Bangladesh, remittances have neither short-run nor long-run association; while in Vietnam, there exist short-run association but no long-run association. In Sri Lanka, the short-run causality flows from remittances to GDP per capita and vice-versa. The study further observed excessive consumption and

investment in unproductive sectors of transferred money result in a negative correlation with economic development.

Ayenew (2022) investigated the impact of foreign financial inflows on the economic growth of 31 sub-Saharan African countries over the period 2009 to 2019. The study employed a two-step system GMM due to its practical advantage on the dynamic panel data set. The finding showed that only foreign direct investment has a significant and positive contribution to economic growth. Official development assistance and external debt affect economic growth negatively, and they are statistically significant. Remittance inflow affects economic growth negatively, but it is statistically insignificant.

Kajtazi and Fetai (2022) examined the causal relationships between remittances and economic growth in 10 Southeast European developing countries, including Greece as a developed country. The research used various econometric techniques, such as OLS, fixed-effects model, random-effects model, and Hausman-Taylor IV estimators. The regression results showed that there is a positive link between remittances and economic growth in 10 Southeastern European countries. Findings support the hypothesis that the remittance inflows generate economic growth in 10 Southeast European countries. Despite this, a positive relationship was also revealed between foreign direct investment, final consumption expenditure, gross capital formation, exports, and economic growth. Onle exchange rate was found not to have a causal link on economic growth, meaning that the exchange rate does not affect economic growth.

Yadeta and Hunegnaw (2022) employed the ARDL model and Granger causality test to investigate the short- and long-run effects and nature of causality of remittances on real GDP respectively for the period 1980 to 2015. The main results are as follows. First, remittance flow significantly improves real GDP in long run. Second, the effect of remittances in the short-run is negative. Third, there is unidirectional causality from remittances to economic growth. Fourth, short-run negative effect is higher than the long-run positive effect. A 1% increase in remittances increases real GDP by 1.13% in long run but reduces real GDP by 1.87% in the short run.

Kudaisi, Ojeyinka and Osinubi (2022) examined the role of financial liberalization in the remittances-growth nexus in Nigeria over the period 1990–2018. To address the possibility of endogeneity among the variables in the model, the study employs the generalized method of moments (GMM) as a technique of analysis. Remittances and financial liberalization were found to have negative significant impacts on economic growth. However, the effect of the interaction term of financial liberalization and remittances on economic growth is positive and significant. This suggests that the two variables act as complements in the enhancement of economic growth in Nigeria.

Badwan and Atta (2020) investigated the impact of International Capital Flows and other Financial Flows on Economic Growth in Palestine during the period (2007-2018). The study also included trends and methods of forming Capital Flows and Financial Capital Flows. The study used the appropriate descriptive and analytical approach by the authors

for the purposes and requirements of the research to investigate the real results and required. The researchers used the time intervals method, and the study concluded that Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Large Loans (World Bank), Worker Remittances (WR), Foreign Affairs Borrowing and Financial Grants (GR) have a noticeable positive impact on Economic Growth in Palestine

Onyike, Ekeagwu and Alamba (2020) investigated the effect of international remittances on the economic growth of Nigeria for the period covering 1986 to 2017. In analysing the data collected the ARDL approach to cointegration and VECM was adopted in determine the long run and short run relationships among economic growth, remittances, gross domestic investment, Interest rate and inflation rate. Findings indicated that in the long run remittances, human capital and inflation rate had positive effect while GDI and interest rate had negative effect on the economic growth of Nigeria. In the short run remittances, human capital, GDI and inflation rate had positive effect while interest rate had negative effect on the economic growth of Nigeria.

Adeseye (2021) examined migrants' remittance and economic growth in Nigeria. Remittance inflow was used as dependent variable and gross domestic products, inflation, imports and exports were independent variables. In this study, secondary data were utilized. The study employs annual data obtained from world development and international financial statistics which covers the period of 29 years (1990-2018). Quantitative data collected were evaluated through descriptive statistics; and the hypotheses formulated were tested with the use of multiple linear regressions which

includes ANOVA, Correlation, and Coefficient. And this was done with the aid of SPSS version 21. From the findings of the study and the tested hypotheses, it was discovered that significant relationship exists between remittance and gross domestic product, exports and imports in Nigeria while inflation has no significant relationship with remittance.

Garba, Adekunle and Adeniyi (2020) analyzed the possible role of the financial sector in the nexus between foreign remittances and economic growth in Nigeria over the period of 1981 to 2015. To circumvent the possible endogeneity problem among foreign remittances, financial development and economic growth, we employed the two-stage least squares (2SLS) technique. Unlike the previous findings, they offered new evidence that the complementarity or substitutability between foreign remittances and financial development in promoting Nigeria's economic growth depends on the indicators of financial development used.

Sutradhar (2020) investigated the impact of workers' remittances on economic growth of four South Asian emerging countries by employing balanced panel data from 1977 to 2016. Pooled OLS, fixed effects, random effects and dummy variable interaction models were used to estimate the impact of remittances. The empirical regression analysis confirmed a negative effect of remittances on economic growth in Bangladesh, Pakistan and Sri Lanka. Conversely, remittances have a positive impact on economic growth in India.

Oladipo (2020) with data from 1970q1 to 2017q4, analyzed the impact of remittances on Nigeria's economic growth. Remittances from Nigerians are estimated to reach $24.3 billion in 2018, ranking second only to oil exports as a source of foreign exchange. Unit root tests were conducted on all the variables of interest and showed that the variables were nonstationary in their levels but stationary after their first difference at the 5% level of significance. Next, the appropriate lag length was determined, and an error correction model was estimated to account for the dynamics of the model. The variables included were four lags each of ΔGDPt, ΔREMt, ΔFDIt, ΔINVt, ΔEXCHt, and ΔOPNt. The study found that worker remittances have a positive impact on economic growth in Nigeria, with a 1% increase in REM increasing RGDP by 0.0238%. Remittances in the short and long run are statistically significant and cointegrated with economic growth, but with low elasticities of 0.02 and 0.03, respectively.

Ari (2020) determined the nexus between remittances and economic growth for Turkey for the period 1994-2018 by using annual data. In The Johansen Cointegration Analysis was firstly used to determine whether there is a long-term relationship between the two variables, followed by the Granger Causality Analysis which was used for the investigate the causality relationship between the variables. It was found that there is a unidirectional relationship from economic growth to remittances in Turkey. Remittance flows into Turkey do not cause economic growth.

Orok, John and Udoka (2020) focused on diaspora remittances and its effect on economic growth in Nigeria. It sought to assess the signification of diaspora remittances,

and to suggest measures that could enhance its effectiveness and economic growth in Nigeria. To achieve the objective of the research, some macroeconomic indicators in the Nigerian economy were evaluated using an ex-post facto research design. The data were collected, analyzed and tested using the Ordinary Least Square (OLS) multiple. From the analysis, it was revealed that there was a significant relationship between total remittances and gross domestic product in Nigeria. Furthermore, workers remittance was found to have an insignificant effect on gross domestic product in Nigeria.

growth of Nigeria for the periods, 1986 to 2016. The study employed four core channels of international capital inflows which includes foreign direct investment (FDI), official development assistance (ODA), personal remittances (REM), and external debt stock (EXTDS) into Nigeria as the explanatory variables and GDP growth rate as the dependent variable. The model of the study was hinged on the Harrod-Domar growth model and employed Johansen cointegration and Ordinary Least Square (OLS) techniques for data analyses. The result showed that international capital inflows have long run effect on economic growth of Nigeria. Specifically, the OLS revealed that FDI and REM had significant positive effects on economic growth. However, EXTDS and ODA had no significant effects on economic growth. The study further showed that international capital is a powerful tool for boosting economic growth of Nigeria (R-square = 71%).

Adjei, Bo, Nketiah, Adu-Gyamfi and Obuobi (2020) investigated the cointegration and Granger causal relationship between remittances and economic growth

in West Africa with special reference to Burkina-Faso, Ghana, Guinea, Guinea-Bissau, Mali, Nigeria, and Togo. Different from limited existing countries studies in west Africa, an advanced panel econometric methodology such as dynamic Panel data techniques was used. Their results suggest that remittances on economic growth in West Africa exert a positive and significant impact. Furthermore, a positive relationship between remittance, real effective exchange rate, trade openness, investment on economic growth was detected.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter deals with the research design, population and sample of the study, sources of data, theoretical framework and model specification, measurement and operationalization of variable as well as method of data analysis.

3.2 Research Design

The research design that will be adopted in this study is the Ex-Post-facto research design, which is very applicable in the management and social sciences. This kind of research design involves the use of secondary data in which responses in the nature of a factor and its effects are being studied, which restricts the researcher from manipulating the outcome of the research. This inability to manipulate the variables stem from the fact that the variables are inherently non-manipulable or because their manifestations have already occurred (Agbonifoh & Yomere, 1999).

3.3 Population and Sample of the Study

Due to the macro nature of this study, the population of this study constitutes data of entire foreign remittances and economic growth indices. The study's sample will be restricted to the variables of the study such as foreign remittances, foreign portfolio investment, foreign direct investment, foreign aid and economic growth within the period of 1985 to 2022.

3.4 Sources of Data

To comply with the stated research objectives, the study will employ time series data mainly from secondary sources which are quantitative in nature. The data will be obtained from the annual statistical bulletin of the Central Bank of Nigeria, National Bureau of Statistics annual bulletin and World Development Index of previous edition for the period under review. The data will cover variables of the study, including foreign

remittances, foreign portfolio investment, foreign direct investment, foreign aid and economic growth.

3.5 Theoretical Framework

This research is built on the Neo Classical theory on investment proposed by Gordon (1992). The theory emphasized that low marginal efficiency of capital markets is unlikely to attract foreign investment (Allen et al., 2010). Conversely, high marginal efficiency of the economy is likely to attract foreign investors desiring high returns on investment. In the Nigerian competition, the Neo-Classical theory is supported by Nyangoro (2013), who observed that increased foreign investment in the stock market increases returns, thereby boosting economic growth performance. Foreign equity portfolio inflows result in increased stock prices, thereby increasing the value of equities and subsequently expanding the economy. Therefore, the Neoclassical theory of Investment is used to explain the impact of foreign remittances on economic growth in Nigeria.

3.6 Model Specification

The regression model is adapted from previous research conducted by Aigheyisi and Ovuefeyen (2013). Aigheyisi and Ovuefeyen (2013) utilised economic growth as a function of foreign direct investment-GDP ratio, personal remittances received as a ratio of the GDP, foreign portfolio investment-GDP ratio, official development assistance and

aid received as a ratio of the GDP and external Debt-GDP ratio. The regression model is specified below:

$MCR = \alpha_0 + \alpha_1 FDIR + \alpha_2 PRRR + \alpha_3 FPIR + \alpha_4 ODAAR + \alpha_5 EXDTR + \varepsilon$……(3.1)

The current study modifies the model of Aigheyisi and Ovuefeyen (2013) by capturing economic growth as a function of foreign remittances, foreign portfolio investment, foreign direct investment, and foreign aid. Therefore, the modified model for this study is stated below:

Model One

The first model is functionally expressed thus:

$RGDP_t = f(REM_t, FDI_t, FPI_t, FA_t,)$----------(3.1)

The above functional model is expressed in its econometric form thus:

$RGDP_t = \beta_0 + \beta_1 REM_t + \beta_2 FDI_t + \beta_3 FPI_t + \beta_4 FA_t + \mathcal{E}_{it}$……...…(3.2)

Where:

$RGDP_t$ = *Real gross domestic product at time t*

REM_t = *Foreign remittances at time t*

FDI_t = *Foreign direct investment at time t*

FPI_t = *Foreign portfolio investment at time t*

FA_t = *Foreign aid at time t*

β_0, β_1–β_4 = *parameters to be estimated*

$\mathcal{E}$ = *error term signifying other variables not captured in the study*

A priori expectation of the model is:

Apriori expectations

(β_1) = Foreign remittances; *a priori* expectation is positive

(β_2) = Foreign direct investment; *a priori* expectation is positive

(β_3) = Foreign poorfolio investment; *a priori* expectation is positive

(β_4) = Foreign aid; *a priori* expectation is positive

Hence, this is further shown here:

$\beta_{1\text{-}4} > 0$

3.7 Operationalization of Variables

Table 3.1: Operationalization of Variables

VARIABLES	TYPE	MEASUREMENT	SOURCE
Economic growth	Dependent Variable	Gross domestic product adjusted at current prices	Adebisi, Adesola, and Arikpo (2017)
Foreign remittances	Independent Variable	Aggregate annual value of trade on the Nigerian exchange limited	Gulliano & Ruiz-Arranz

			(2005)
Foreign direct investment	Independent Variable	Summation of all foreign direct investment annually, that is; (	Correia (2015)
Foreign portfolio investment	Independent Variable	Summation of all foreign portfolio investment annually, that is; (	Solnik & Mcleavy (2009)
Foreign aid	Independent Variable	Annual figure of foreign aid	Mahembe & Okhlambo (2019)

Source: Researcher's compilations (2024).

3.8 Method of Data Analysis

The study will adopt the ordinary least squares (OLS) econometric technique to analyse the empirical model and examine the effect of foreign remittances on economic growth in Nigeria. Various tests will be conducted to evaluate the results, which include t-test, R-Squared and f-test. Time series analysis will be carried out to test the data for stationarity or non-stationarity problems using Augmented Dickey-Fuller (ADF), which is an extension of Dickey-Fuller test. After that, the researcher will run a cointegration test to establish whether the non-stationarity variables are cointegrated and to confirm the existence of a long run equilibrium relationship between the variables. Also, the unit root test will be carried out to determine whether the orders of integration of the variables of interest were compatible with the selected econometric methodological framework. An

error correction model will be specified having established the cointegration to present the short run dynamics while preserving the long run equilibrium relationship.

CHAPTER 4

EMPIRICAL ANALYSIS

4.1 Introduction

This chapter presents the empirical results and the analysis. The analysis of results starts with the presentation of descriptive statistics. Also, the correlation matrix of the variables is reported. These are followed by the presentation of the regression results.

4.2 Descriptive Statistics

The results of the descriptive statistics are reported in Table 4.1 below

Table 4.1: Descriptive Statistics

	RGDP	***REM***	***MS***	***EXR***	***INFL***
Mean	41475.05	8.78E+09	9088.029	116.2719	19.55857
Maximum	202365.0	2.43E+10	48462.07	448.5500	76.76000
Minimum	139.3100	2424527.	14.47000	0.610000	0.220000
Std. Dev.	55932.01	9.82E+09	13281.91	120.5999	17.41094
Skewness	1.336628	0.351788	1.423131	1.068965	1.767971
Kurtosis	3.703695	1.221719	3.900206	3.400840	5.317449
Jarque-Bera	13.37259	6.400279	15.59526	8.279983	31.27855
Probability	0.001248	0.040757	0.000411	0.015923	0.000000

Source: Author's computation using EViews 8.0

In Table 4.1, real gross domestic product (RGDP) has a mean of ₦41,475.05 billion over the period 1981 to 2022. The maximum and minimum values of real GDP for the period are about ₦202,365 billion and ₦139.31 billion respectively. The value of skewness for real GDP is 1.34. This means that the distribution of real GDP is skewed to the right. Its kurtosis value of 3.7 which is greater than 3 indicates that the distribution of real GDP is slightly peaked. The Jarque-Bera value, 13.37 with probability value less than of 0.01 indicates that real GDP is not normally distributed.

The amount of money supply (MS) has a mean of ₦9,088.03 billion in Nigeria over the period 1981 to 2022. The value of money supply ranged from ₦14.47 billion to

₦48,462.07 billion within the period of review. The distribution of money supply has a skewness value of 1.42 indicating that it is skewed slightly to the right. Its kurtosis (3.90) shows that the distribution is leptokurtic. The Jarque-Bera value of 15.6 with probability value less than 0.01 suggests that money supply is not normally distributed about its mean at the 5% level of significance.

Inflation rate (INFL) has a mean of 19.56% over the period 1981 to 2022 in Nigeria. It ranged from 0.22% to 76.76% within the period. Its skewness value is 1.77 indicating that the distribution of inflation rate is skewed slightly to the right. Its Kurtosis (5.32) shows that the distribution is leptokurtic. The Jarque-Bera value of 31.27 with probability value less than 0.01 suggests that life inflation rate is not normally distributed about its mean at the 5% level of significance.

For the period under review, personal remittances received (REM) has a mean value of US$8.78 billion. The maximum and minimum amounts of remittances for the period are US$24.3 billion and US$2,424,527 respectively. Its skewness (4.56) shows that the distribution of remittances is positively skewed. Its Kurtosis (0.35) indicates that the distribution is flat. The Jarque-Bera statistic (6.40) with a probability value of 0.04 indicates that the variable is not normally distributed at the 5% level of significance.

Exchange rate (EXR) has a mean of ₦116.27 to the US dollar within the period of review in Nigeria. The maximum and minimum values of the official exchange rate for the period are ₦448.55 and ₦0.61 to the US dollar respectively. The skewness value is 1.07

and it indicates that the distribution of exchange rate is skewed to the right. Its Kurtosis (3.4) indicates that the distribution is slightly leptokurtic. The Jarque-Bera value of 8.28, with probability value of 0.02 suggests that the variable is not normally distributed at the 5% level.

4.3 Pair-wise Correlation

The correlation matrix for all the variables in the study is reported in Table 4.2.

Table 4.2: Pair-wise Correlation Matrix

Correlation Probability	RGDP	REM	MS	EXR	INFL
RGDP	1.000000 -----				

REM	0.826143	1.000000			
	0.0000	-----			
MS	0.997229	0.799745	1.000000		
	0.0000	0.0000	-----		
EXR	0.958419	0.802941	0.947702	1.000000	
	0.0000	0.0000	0.0000	-----	
INFL	-0.237629	-0.353925	-0.213580	-0.277918	1.000000
	0.1297	0.0215	0.1744	0.0747	-----

Source: Author's computation using E-views 8.0

From Table 4.2, the correlation statistics between real gross domestic product (RGDP) and foreign remittances (REM) is positive and significant at the 5% level ($r = 0.83$, $p < 0.01$). Similarly, money supply (MS) is positively associated with real gross domestic product (RGDP) ($r = 0.997$, $p < 0.01$). Again, exchange rate (EXR) is positively related to the real gross domestic product (RGDP), ($r = 0.96$, $p < 0.01$) and statistically significant at the 5% level. The correlation coefficient between inflation rate (INFL) and real gross domestic product is negative but insignificant at the 5% level ($r = -0.24$, $p = 0.13$). As revealed in the correlation matrix, there are no high correlation coefficients among the most of explanatory variables. This suggests that there is no serious multicollinearity issue among the explanatory variables.

4.4 Presentation and Interpretation of Regression Results

The results of the model for economic growth are presented in Table 4.3.

Table 4.3: Economic Growth Model Results

Dependent Variable: Real Gross Domestic Product, (RGDP)				
Regressor	Coefficient	Standard Error	T-Ratio	Probability
REM	3.83E-07	1.05E-07	3.654995	0.0008
MS	3.592239	0.145905	24.62047	0.0000
EXR	42.77558	15.96940	2.678596	0.0112
INFL	-19.94639	29.80023	-0.669337	0.5077
C	917.1414	1344.617	0.682084	0.4997
R-Squared **0.9980**			***R-Bar-Squared***	**0.9977**
F-Stat. **3468.48 [< 0.01]**			***Durbin-Watson Stat.***	**1.7140**

(Source: Author's computation using E-views 8.0)

The coefficient of determination of the fixed model, R-squared (R^2) is about 0.998 and the adjusted R-squared ($\bar{R}^2$) is 0.998. The adjusted R-squared implies that about 99.8% of the systematic variations in real gross domestic product are explained by the regressors in the model. The F-statistic ($F(4, 38) = 3468.48, p < 0.01$) shows the overall economic growth model is significant at the 1% level. Hence, the overall goodness of fit is significant. The Durbin-Watson statistic indicates the residuals are not serially correlated.

The signs of all the estimated coefficients of the explanatory variables in the economic growth model conformed to their a priori expectations except exchange rate (EXR). The coefficient of foreign remittances is positive and significant at the 5% level (t = 3.65, p <

0.01). This implies that foreign remittances have a positive significant impact on economic growth in Nigeria. The coefficient of money supply (MS) is positive. Its coefficient is 3.59 and a t-statistic of 24.62. Its p-value is less than 0.01. The coefficient passed the statistical test of significance at the 1% level. The implication is that money supply has a positive significant impact on economic growth in Nigeria. The coefficient of exchange rate (EXR) is positive and significant at the 5% level (t = 2.67, p = 0.01). This implies that exchange rate has a positive significant impact on economic growth in Nigeria. The implication is that ₦1 depreciation in the exchange rate will improve economic growth by about ₦42.78 million annually.

The coefficient of inflation rate (INF) is negative. It is insignificant at the 5% level (t = -0.67, p = 0.51). This shows that although inflation rate has an adverse effect on economic growth, it is insignificant in Nigeria.

4.5 Test of Hypotheses

On the basis of the regression results, we can test the validity of the hypotheses presented in chapter one of this research.

Hypothesis 1: Foreign remittances have no significant impact on the economic growth in Nigeria.

From the regression results, the coefficient of foreign remittances is significant at the 1% level$(t = 3.65, < 0.01)$. Accordingly, we cannot reject the null hypothesis that foreign remittances have no significant impact on the economic growth in Nigeria. This implies that foreign remittances have positive impact on economic growth in Nigeria.

Hypothesis 2: Money supply has no significant effect on economic growth in Nigeria.

As revealed in the regression results, the coefficient of money supply is positive and significant at the 1% level $(t = 24.62, p < 0.01)$. Hence, we cannot accept the null hypothesis that money supply has no significant effect on economic growth in Nigeria. The implication is that money supply significantly affects economic growth in Nigeria.

Hypothesis 3: Exchange rate does not have any effect on economic growth in Nigeria.

As revealed in the regression results, the coefficient of exchange rate is positive and significant at the 5% level $(t = 2.68, p = 0.01)$. Hence, we cannot accept the null hypothesis that exchange rate does not significantly affect economic growth in Nigeria. This implies that exchange rate has a significant impact on economic growth in Nigeria.

Hypothesis 4: Inflation rate has no significant effect on the economic in Nigeria.

As revealed in the regression results, the coefficient of inflation rate is insignificant at the 5% level $(t = -0.67, p = 0.51)$. Hence, we cannot reject the null hypothesis that inflation rate has no significant effect on the economic growth in Nigeria. This implies that inflation rate does not significantly influence economic growth in Nigeria.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.0 Introduction

In this chapter, the main findings of the study are summarized. Next, the recommendations of the study are provided. Lastly, the conclusion is stated.

5.1 Summary of Findings

The major findings of this study are stated as follows:

1. It was revealed that foreign remittances have a significant impact on economic growth in Nigeria.
2. It was found that money supply has a positive significant impact on economic growth in Nigeria
3. It was discovered that exchange rate has a positive significant impact on economic growth in Nigeria.
4. The study found that inflation rate has an insignificant impact on economic growth in Nigeria.

5.2 Recommendations

Based on the empirical findings of this research, the following recommendations have been proffered:

1. Government should create the enabling environment to attract foreign remittances into the country. They should come up with appropriate monetary policy

measures backed up with implementable strategies to encourage workers living abroad to repatriate their money home to boost economic growth in Nigeria.

2. Given that remittances inflow increases domestic money supply and money supply was found to have a positive significant impact on economic growth, the monetary authority should ensure sound and stable financial system to encourage effective and efficient money circulation in the economy.
3. Exchange rate was found to have a positive impact on economic growth. This suggests that depreciation of the naira has been associated with some growth in economy. To further boost economic growth, the monetary authority should stabilize the exchange rate by encouraging remittances inflow by reducing the cost of remittances transfers to the country.
4. The rate of inflation in Nigeria should be stabilized to reduce uncertainties. This will encourage foreign remittances into the country and boost economic growth.

5.3 Conclusion

This study sought to examine the impact of foreign remittances on the economic growth in Nigeria. It was found that foreign remittances have a significant impact on economic growth in Nigeria. The implication is that Nigeria can take a advantage of her citizens' remittances from abroad to boost her economy by creating an investment friendly environment in the country. Nigeria can attract more foreign inflows into the country by reducing the cost of transfers, and other stringent money transfer policy to boost remittances and improve its economy. Remittances provide an alternative mean of

funding investment in a country. Since remittances significantly improve economic growth in Nigeria, government should leverage on this viable alternative source of funds to bridge the domestic savings-investments gap to boost economic growth. It should encourage their citizens in diaspora to repatriate money home for investment and other developmental purposes. This should be done by providing an enabling environment for business ventures. Also, the governments should provide stable macroeconomic environment by stabilizing the inflation rate and the exchange rate. Furthermore, it was discovered that money supply has a positive significant effect on economic growth. This suggests that since increased remittance inflows are capable of raising the domestic money supply in the country, remittances boosts money supply to improve economic growth. In other words, remittances inflows play a crucial role in the monetary sector by influencing other key monetary variables which in turn enhances economic growth in Nigeria.

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Appendix

Data

	RGDP	REM	MS	EXR	INFL
1981	139.3100	16188874	14.47000	0.610000	17.40000
1982	149.0500	17818397	15.79000	0.670000	6.940000
1983	158.7500	13804340	17.69000	0.720000	38.77000
1984	165.8500	11741263	20.11000	0.760000	22.63000
1985	187.8300	10069659	22.30000	0.890000	1.030000
1986	198.1200	3989688.	23.81000	2.020000	13.67000
1987	244.6800	2739018.	27.57000	4.020000	9.690000
1988	315.6200	2424527.	38.36000	4.540000	61.21000
1989	414.8600	10183666	45.90000	7.390000	44.67000
1990	494.6400	10008540	47.42000	8.040000	3.610000
1991	590.0600	65544714	75.40000	9.910000	22.96000
1992	906.0300	56448404	111.1100	17.30000	48.80000
1993	1257.170	7.93E+08	165.3400	22.05000	61.26000
1994	1768.790	5.50E+08	230.2900	21.89000	76.76000
1995	3100.240	2.50E+08	289.0900	21.89000	51.59000
1996	4086.070	2.97E+08	345.8500	21.89000	14.32000
1997	4418.710	5.86E+08	413.2800	21.89000	10.21000

1998	4805.160	4.49E+08	488.1500	21.89000	11.91000
1999	5482.350	1.30E+09	628.9500	92.69000	0.220000
2000	7062.750	1.39E+09	878.4600	102.1100	14.52000
2001	8234.490	1.17E+09	1269.320	111.9400	16.50000
2002	11501.45	1.21E+09	1505.960	120.9700	12.19000
2003	13556.97	1.06E+09	1952.920	129.3600	23.79000
2004	18124.06	2.27E+09	2131.820	133.5000	10.01000
2005	23121.88	1.46E+10	2637.910	132.1500	11.60000
2006	30375.18	1.69E+10	3797.910	128.6500	8.500000
2007	34675.94	1.80E+10	5127.400	125.8300	6.600000
2008	39954.21	1.92E+10	8643.430	118.5700	15.10000
2009	43461.46	1.84E+10	9687.510	148.8800	13.90000
2010	55469.35	1.97E+10	11101.46	150.3000	11.80000
2011	63713.36	2.06E+10	12628.32	153.8600	10.30000
2012	72599.63	2.05E+10	15503.41	157.5000	12.00000
2013	81009.96	2.08E+10	18743.07	157.3100	7.960000
2014	90136.98	2.10E+10	20415.61	158.5500	7.980000
2015	95177.74	2.06E+10	20885.52	193.2800	9.550000
2016	102575.4	1.97E+10	24259.00	253.4900	18.55000
2017	114899.3	2.20E+10	28604.47	305.7900	15.37000

2018	129086.9	2.43E+10	29774.43	306.0800	12.10000
2019	145639.1	2.38E+10	34257.90	306.9200	11.40000
2020	154252.3	1.72E+10	36038.01	358.8100	15.80000
2021	176075.5	1.95E+10	40370.41	399.9600	16.95000
2022	202365.0	2.01E+10	48462.07	448.5500	21.34000

Descriptive Statistics

	RGDP	**REM**	**MS**	**EXR**	**INFL**
Mean	41475.05	8.78E+09	9088.029	116.2719	19.55857
Median	9867.970	1.26E+09	1387.640	115.2550	13.78500
Maximum	202365.0	2.43E+10	48462.07	448.5500	76.76000
Minimum	139.3100	2424527.	14.47000	0.610000	0.220000
Std. Dev.	55932.01	9.82E+09	13281.91	120.5999	17.41094
Skewness	1.336628	0.351788	1.423131	1.068965	1.767971
Kurtosis	3.703695	1.221719	3.900206	3.400840	5.317449
Jarque-Bera	13.37259	6.400279	15.59526	8.279983	31.27855
Probability	0.001248	0.040757	0.000411	0.015923	0.000000
Sum	1741952.	3.69E+11	381697.2	4883.420	821.4600
Sum Sq. Dev.	1.28E+11	3.96E+21	7.23E+09	596318.2	12428.77
Observations	42	42	42	42	42

Correlation Analysis

Covariance Analysis: Ordinary

Date: 05/12/24 Time: 12:36

Sample: 1981 2022

Included observations: 42

Correlation Probability	RGDP	REM	MS	EXR	INFL
RGDP	1.000000 -----				
REM	0.826143 0.0000	1.000000 -----			
MS	0.997229 0.0000	0.799745 0.0000	1.000000 -----		
EXR	0.958419 0.0000	0.802941 0.0000	0.947702 0.0000	1.000000 -----	
INFL	-0.237629 0.1297	-0.353925 0.0215	-0.213580 0.1744	-0.277918 0.0747	1.000000 -----

Regression Results

Dependent Variable: RGDP

Method: Least Squares

Date: 05/12/24 Time: 12:31

Sample (adjusted): 1982 2022

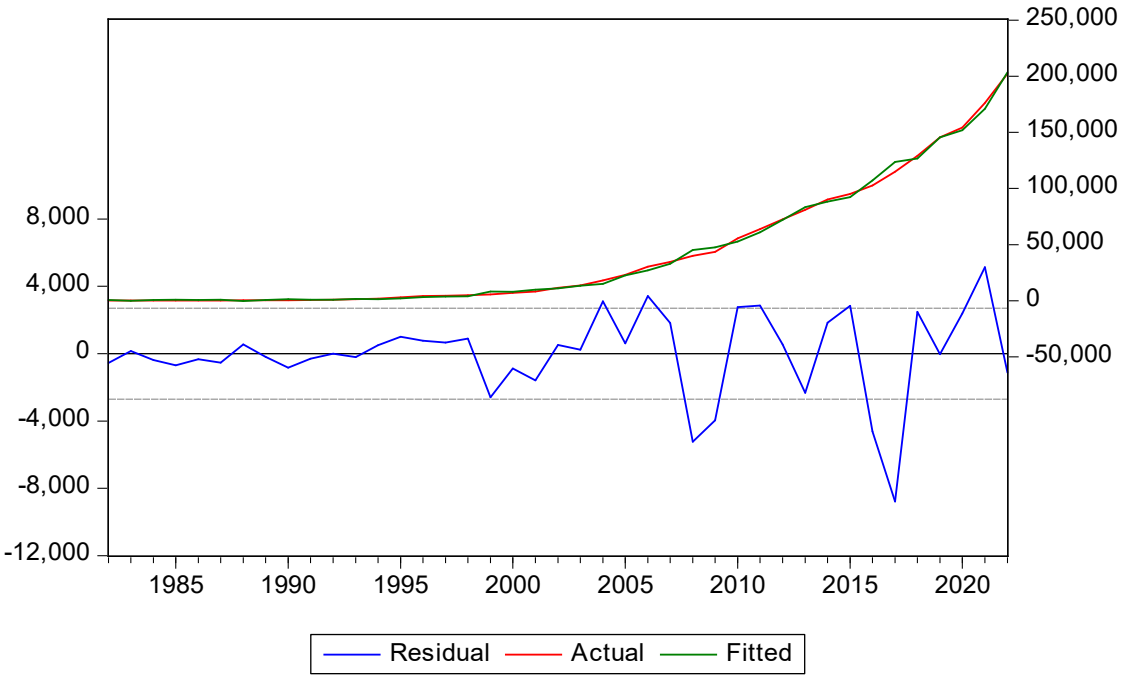
Included observations: 41 after adjustments

Convergence achieved after 17 iterations

Variable	Coefficiet	Std. Error	t-Statistic	Prob.
REM	3.83E-07	1.05E-07	3.654995	0.0008
MS	3.592239	0.145905	24.62047	0.0000
EXR	42.77558	15.96940	2.678596	0.0112
INFL	-19.94639	29.80023	-0.669337	0.5077
C	917.1414	1344.617	0.682084	0.4997
AR(1)	0.343234	0.159611	2.150436	0.0385

R-squared	0.997986	Mean dependent var	42483.24
Adjusted R-squared	0.997698	S.D. dependent var	56239.14
S.E. of regression	2698.213	Akaike info criterion	18.77303
Sum squared resid	2.55E+08	Schwarz criterion	19.02379
Log likelihood	-378.8470	Hannan-Quinn criter.	18.86434
F-statistic	3468.481	Durbin-Watson stat	1.713991
Prob(F-statistic)	0.000000		

Inverted AR Roots	.34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