

**FOREIGN REMITTANCES INFLOWS, OFFICIAL  
DEVELOPMENT ASSISTANCE AND ECONOMIC  
GROWTH IN NIGERIA**

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BENIN CITY**

**AUGUST, 2023.**

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**A PROEJCT SUBMITTED TO DEPARTMENT OF BANKING  
AND FINANCE, FACULTY OF MANAGEMENT SCIENCES,  
IN PARTIAL FULFILLMENT IN THE REQUIREMENT FOR  
BACHELOR DEGREE IN SCIENCE (B.SC) IN BANKING AND  
FINANCE, UNIVESITY OF BENIN, BENIN CITY**

**AUGUST, 2023.**

## **DECLARATION**

1, **ECHIEJILE GODWIN VICTOR** do hereby declare that this project is entirely my work and composition. The work embodied in this project has not been submitted in candidature for any degree and is not concurrently being submitted for any other degree.

\_\_\_\_\_  
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**Date** \_\_\_\_\_

## CERTIFICATION

This is to certify that this study was carried out by I, **ECHIEJILE GODWIN VICTOR** with matriculation number MGS1807844 of the Department of Banking and Finance, Faculty of Management Sciences, University of Benin, Benin City, Edo State, Nigeria.

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## **DEDICATION**

This project is dedicated to Almighty God.

## ACKNOWLEDGEMENTS

In the world of competition there is a race of existence in which those having will to come forward succeed. Project is like a bridge between theoretical and practical working. With this willing I joined this particular project.

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## ABSTRACT

The investigation centered on the correlation amid official development assistance (ODAO), inflow of foreign remittances (FRO), and the economic advancement in Nigeria spanning from 1986 to 2022. To scrutinize the data, the autoregressive distributed lags (ARDL) methodology was employed. The outcomes generally revealed that, over the long term, official development assistance (ODAO) exhibits a weak positive link with Nigeria's economic growth. On the other hand, the inflow of foreign remittances (FRO) holds an inconsequential negative influence on the nation's economic expansion over the extended period. Furthermore, the factor of financial openness (FOPN) does not exert any discernible impact on growth. In the short term, the exchange rate (EXCHR) significantly demonstrates a negative effect on economic growth. In addition, past values of Gross Domestic Product (GDP) wield a more considerable influence on Nigerian economic growth in the short term compared to current values.

One of the suggestions put forth by the study is that the insignificant adverse effect of outbound foreign remittances (FRO) on economic growth underscores its detrimental nature. This aspect has the potential to amplify domestic economic growth constraints, undermine local investments, and lead to a decline in overall tax revenue. Hence, it is imperative for policymakers and governmental bodies to actively pursue strategies that discourage the outflow of capital in the form of remittances. For instance, imposing

limits on repatriating a portion of domestic earnings could alleviate financial constraints, invigorate domestic investments, and enhance tax inflow. By ardently pursuing such measures, the positive impact of FRO on Nigeria's economic growth can be effectively harnessed.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

Foreign remittances and official development assistance (ODA) are two crucial external finance sources significantly influencing the economic growth of developing nations (Zardoub & Sboui, 2021). In the context of Nigeria, remittances and ODA have been increasing lately, although the extent of their contribution to economic growth remains unclear (Osili, 2019).

Monetary transfers from migrants to their home countries, known as remittances, have become indispensable for various developing nations, including Nigeria. As per the World Bank, remittances to Nigeria surged from \$19.6 billion in 2016 to \$24.3 billion in 2018 (World Bank, 2021). These inflows constitute a substantial portion of Nigeria's foreign exchange earnings and have the potential to fuel economic growth. However, the relationship between remittances and economic growth is intricate and not yet fully comprehended. While some studies assert a positive impact of remittances on economic growth (Chami, Fullenkamp, & Jahjah, 2015), others indicate potential negative effects like Dutch disease or crowding-out (Adams & Cuenca, 2013).

Foreign remittances to Nigeria encompass various elements, including foreign direct investment (FDI), foreign portfolio investment (FPI), trade openness, and workers'

remittances. FDI has emerged as a significant external finance source for Nigeria, with substantial investments flowing into the country recently. According to the United Nations Conference on Trade and Development (UNCTAD), FDI inflows to Nigeria escalated from \$3.5 billion in 2016 to \$3.3 billion in 2019 (UNCTAD, 2021). FDI's positive impact on Nigeria's economic growth lies in technology, skills, and knowledge transfer (Nwankwo, Nwokoye & Chukwu, 2020). Similarly, FPI has become vital for Nigeria, with considerable funds entering through the stock market. The Nigerian Exchange Group (NGX) reports foreign portfolio investors injecting ₦1.23 trillion (\$3.22 billion) into the Nigerian stock market in 2020 (NSE, 2021). FPI's positive influence on Nigeria's economic growth stems from providing long-term finance for businesses and government projects (Adesoye, Atanda & Alimi, 2017).

Trade openness, denoting a country's extent of engagement in international trade, is another crucial facet affecting foreign remittances to Nigeria. Nigeria has implemented trade policies to foster trade openness, including free trade zones and trade agreements. According to the World Bank, Nigeria's trade openness index climbed from 23.2 in 2010 to 28.5 in 2019 (World Bank, 2021). Trade openness positively affects Nigeria's economic growth by fostering international trade, facilitating technology and knowledge transfer (Ojo, Ogunrinola & Akinwale, 2021).

Official Development Assistance (ODA) is another pivotal external finance source for many developing nations. ODA refers to grants or loans provided by donor countries or

international organizations to bolster economic and social development in recipient countries. Nigeria has been a notable recipient of ODA, receiving aid from multiple international development entities (OECD, 2021). Despite the substantial aid Nigeria has obtained, the impact of ODA on economic growth remains a subject of debate. While some studies highlight aid's positive impact on economic growth (Hansen & Tarp, 2010), others suggest potential negative effects such as aid dependency or rent-seeking (Mavrotas, 2012).

Despite experiencing economic growth due to foreign remittances and official development assistance, Nigeria's growth remains unstable, leaving a considerable portion of the population in poverty (Oyinlola & Adesoye, 2021). This raises a crucial question about the sustainability of foreign remittances and official development assistance in contributing to Nigeria's economic growth.

## **1.2 Statement of the Research Problem**

Foreign remittance inflows and official development assistance (ODA) stand as two primary wellsprings of external financing that exert substantial influence on the economic advancement of developing nations. Within Nigeria, there has been a discernible upswing in both remittance inflows and ODA in recent times. However, the precise extent of their contribution to economic growth remains shrouded in ambiguity. Furthermore, an evident dearth of empirical substantiation regarding the interplay between foreign remittance inflows, ODA, and economic growth in Nigeria curtails a

comprehensive comprehension of the mechanisms underpinning the impact of these external financial reservoirs on economic progress and development.

Contemporary investigations put forth the notion that remittance inflows can yield both favorable and adverse repercussions for economic growth, contingent upon their allocation and the institutional milieu governing their reception (Adams & Cueduecha, 2013; Chami, Fullenkamp, & Jahjah, 2015). Likewise, the efficacy of ODA in stimulating economic growth within developing nations has engendered considerable scholarly debate (Easterly, 2013; Mavrotas, 2012).

Given Nigeria's persistent challenges in attaining sustainable economic development (Oyinlola & Adesoye, 2021), a comprehensive exploration into the influence of remittance inflows and ODA on economic growth within the nation becomes imperative. Although select inquiries have delved into the ramifications of remittance inflows on poverty mitigation and household well-being in Nigeria (Adekunle, 2019; Akinyemi, 2018), the dynamics of how both remittance inflows and ODA exert their effects on the country's economic growth are yet to be illuminated.

Moreover, the extant literature predominantly scrutinizes the impacts of remittance inflows and ODA in isolation (Adams & Cueduecha, 2013; Oyinlola & Adesoye, 2021; Adekunle, 2019; Akinyemi, 2018), with little regard for their conjoined implications on economic growth. This conspicuous void serves as a pivotal juncture that this study endeavors to address by meticulously examining the potential synergy or

interchangeability between remittance inflows and ODA in fostering economic growth within Nigeria.

In essence, the crux of this study revolves around augmenting the existing body of literature concerning the correlation between external financial reservoirs and economic advancement within Nigeria. By meticulously investigating the influence of both remittance inflows and ODA on economic growth and delving into the plausible synergy or interchangeability of these two external fiscal sources, this study is poised to furnish invaluable insights into the mechanisms by which Nigeria can forge ahead toward sustainable economic development.

### **1.3 Research Questions**

The study shall be guided by the following questions:

- i. What is the effect of foreign direct investment on economic growth in Nigeria?
- ii. Does foreign portfolio investment have any effect on economic growth in Nigeria?
- iii. How does trade openness affect economic growth in Nigeria?
- iv. What is the effect of foreign remittances on economic growth in Nigeria?
- v. Is there any link between official development assistance and economic growth in Nigeria?

#### **1.4 Objectives of the study**

The general objective of this study is to examine the effect of foreign remittance inflows and official development assistance (ODA) on economic growth in Nigeria. However, the specific objectives are to:

- i. ascertain the effect of foreign direct investment on economic growth in Nigeria;
- ii. determine the effect of foreign portfolio investment on economic growth in Nigeria;
- iii. ascertain the effect of trade openness on economic growth in Nigeria;
- iv. examine the effect of foreign remittances on economic growth in Nigeria; and
- v. Establish the relationship between overseas development assistance and economic growth in Nigeria.

#### **1.5 Research Hypotheses**

The following null hypotheses were formulated to guide the study:

**H<sub>01</sub>:** Foreign direct investment does not have any significant effect on economic growth in Nigeria

**H<sub>02</sub>:** Foreign portfolio investment does not have significant effect on economic growth in Nigeria

**H<sub>03</sub>:** Trade openness does not have any significant effect on economic growth in Nigeria

**H04:** Foreign remittances do not have any significant effect on economic growth in Nigeria.

**H05:** Overseas development assistance does not have any significant effect on economic growth in Nigeria

## **1.6 Significance of the Study**

The forthcoming study holds substantial implications for a range of stakeholders, encompassing policymakers, international development bodies, the private sector, the populace of Nigeria, and the academic realm. In the context of Nigerian policymakers, this study offers potential benefits by furnishing insights into the repercussions of foreign remittances and official development assistance (ODA) on the nation's economic advancement. The outcomes of this inquiry can serve as an informational foundation for shaping policy determinations regarding the adept utilization of these external financial reservoirs to propel sustainable economic progress in Nigeria. This encompasses the potential revelation of domains where governmental policies and regulations necessitate enhancement to optimize the advantages derived from remittance inflows and ODA, subsequently fostering economic growth.

Furthermore, international development entities can harness the insights gleaned from this study to formulate more efficacious strategies for provisioning support to Nigeria. A comprehensive grasp of how remittance inflows and ODA influence economic

expansion empowers these organizations to formulate interventions that harmonize more effectively with Nigeria's developmental requisites and priorities.

Simultaneously, the corporate sector in Nigeria can draw valuable insights from this research, accruing understanding regarding the conceivable economic windfalls from foreign remittance inflows and ODA. The revelations of this study can guide investment choices within the private sector and aid in the pinpointing of sectors where optimal gains from these extraneous fiscal resources can be achieved to stimulate economic growth.

Not to be overlooked, the Nigerian populace stands to reap benefits from this research endeavor. The study has the potential to unveil the manners in which remittance inflows and ODA intersect with poverty alleviation, job generation, and other pivotal facets of economic progress germane to the well-being of the people. This enhanced comprehension of the influence wielded by these external fiscal resources on economic advancement equally empowers the populace to hold policymakers accountable for the effective utilization of these resources.

Finally, the academic community also stands to gain from this investigatory effort by virtue of the pathways it opens for further exploration. This research study is poised to make a meaningful contribution to the extant body of literature concerning foreign remittances, official development assistance, and economic growth. Subsequent

scholars can leverage this foundational work as a stepping stone for conducting supplementary research inquiries in related domains.

### **1.7 Scope of the Study**

The research delved into examining the influence of foreign remittances and official development assistance (ODA) on the economic growth of Nigeria. Spanning a period of 27 years (1995-2021), this duration was deemed pertinent to this inquiry due to the availability and accessibility of the required data during the study's execution. This timeline was chosen to accurately reflect contemporary patterns and encompass the phases subsequent to the SAP and the 2008 financial crisis. Within this study, we will analyze foreign remittance inflows and official development assistance (ODA) as targeted variables, while Real Gross Domestic Product (RGDP) will serve as the gauge for economic growth.

### **1.8 Limitation of the Study**

The data commonly encountered during the pursuit of management science research exhibits a non-experimental nature, lying beyond the researcher's sphere of control. Given this lack of control, the precise determination of the influence of foreign remittance inflows and official development assistance (ODA) on Nigeria's economic growth presents specific challenges. The reliability of sources for several variables under investigation remains uncertain due to the study's reliance on secondary data. Substantial constraints on the study's findings arise from inconsistencies in the values of

variables derived from the utilized data sources. However, this limitation was alleviated by a concerted effort to rely predominantly on data from reputable sources such as the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics, and the World Bank Database. These sources, known for their reliability both within Nigeria and internationally, aided in mitigating this constraint.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter aims to undertake a comprehensive exploration of the pertinent literature interconnected with the subject under investigation. The literature review encompasses all essential concepts, empirical substantiations, and theoretical interpretations requisite for a meticulous scrutiny and comprehension of the research. It provides insight into alternative perspectives on the impact of foreign remittance inflows and official development assistance on the economic growth within Nigeria.

#### **2.2 Conceptual Review**

##### **2.2.1 Economic Growth**

Economic growth is frequently defined as the augmentation of Gross Domestic Product (GDP). This concept entails an expansion in a nation's aggregate production of goods and services, or an amplified output of goods and services during a designated timeframe. The notion of economic advancement is typically comprehended as the pace at which the annual yield of goods and services burgeons in actual terms. On the other hand, economic development constitutes a more intricate and less precisely quantifiable term, extending beyond monetary dimensions. It encompasses a myriad of interconnected factors that relate to human existence (Okeke, Mbonu, & Amahalu, 2018).

Abomaye-Nimenibo, Eyo, and Friday (2018) articulate economic growth as a sustained quantitative upswing in a nation's per capita output or income, concomitant with amplified labor force, consumption, capital, and trade volume. In contrast, economic development transcends the confines of economic growth, encompassing a wider spectrum. It pertains to qualitative transformations in economic aspirations, commodities, incentives, establishments, productivity, and knowledge. This overarching concept embodies the general upward trajectory of the societal framework. It follows that while an economy can undergo growth without concomitant development, due to the persistence of issues like poverty, unemployment, and disparities, true development involves rectifying these challenges. Therefore, economic growth is epitomized as the expansion of a nation's total output within a specified time span.

### **2.2.1.1 Gross Domestic Product**

The gross domestic product (GDP) stands as the monetary valuation of all completed goods and services manufactured within a nation's borders throughout a designated time frame. Inclusive in the GDP computation are all forms of private and public expenditure, governmental outlays, investments, privately held inventories, construction expenses, and the nation's trade balance with other countries (where exports contribute and imports are deducted) (Yaro & Adeiza, 2021). This metric serves as a comprehensive gauge of a country's overall economic engagement.

As a widely utilized gauge, GDP not only signifies a nation's economic well-being but

also gauges its standard of living. The uniformity in GDP calculation methodology across nations enables a precise cross-country comparison of productivity levels. By accounting for inflation fluctuations annually, a seamless evaluation of current GDP measurements against those of preceding years or quarters becomes feasible. Consequently, a nation's GDP from any timeframe can be evaluated as a proportion relative to earlier periods (Ndum, Okoye, & Amahalu, 2019).

### **2.2.1.2 Employment**

The employment rate stands as another gauge of economic growth. Attaining optimal employment is not an isolated objective; rather, it should be pursued in conjunction with industrial expansion and structural transformation. The goal should not merely be the provision of jobs, but rather enabling the employed workforce to contribute meaningfully to the economy (Myint & Krueger, 2016).

Furthermore, unemployment is not exclusive to developing nations, as even "developed" countries witness significant joblessness during recessions. Hence, the nature of unemployment holds significance, encompassing diverse forms such as voluntary and involuntary unemployment, technical unemployment (where manual roles are replaced by mechanized processes, like typists substituted by computers), and structural unemployment (resulting from shifts in the economy's framework, like the replacement of horse-drawn carriages with automobiles or manual labor with education), as well as cyclical unemployment brought about by economic fluctuations (Panth, 2016).

### **2.2.1.3 Gross National Income**

The composition of Gross National Income (GNI) includes Gross Domestic Product (GDP) along with the net earnings from primary income such as wages and rents originating from non-resident entities (Fente, 2022). To ensure international data comparability, the Atlas method is employed by the World Bank, employing a three-year average of exchange rates (with adjustments for relative inflation in earlier years). This approach smooths out the impact of short-term fluctuations in exchange rates, providing a stable calculation of GNI in U.S. dollars (Lotfaliany et al., 2018). GNI serves as a metric for encompassing the cumulative value, both domestically and internationally, that residents generate.

Interestingly, substantial disparities in price levels among economies undermine the precision of GNI and GDP conversions using market exchange rates, particularly concerning gauging economic magnitudes, wealth disparities, and material prosperity. To mitigate this, estimates are transformed into international dollars via purchasing power parity (PPP) rates. These rates gauge the quantity of goods and services that can be acquired in another nation with the equivalent of one unit of a country's currency. Consequently, PPPs facilitate the conversion of a basket of goods and services into a uniform currency, effectively eliminating inter-country variances in price levels. In essence, PPPs equalize currency purchasing power, thereby allowing for a valid comparison of genuine expenditure levels across nations, akin to how a conventional

price index enables the assessment of real values over time (Bolt, Inklaar, De Jong & Van Zanden, 2018).

#### **2.2.1.4 Per Capita Income (PCY)**

Real per capita income also serves as an indicator of economic growth, as it is considered the most precise gauge of the average living standard of a population (Yumashev, Lusarczyk, Kondrashev, and Mikhaylov, 2020). The term "underdeveloped countries," as used by the United Nations, carries ambiguity. It pertains to nations with a low PCY compared to the United States, Canada, Australia, and Western Europe (Higgins, 1963 as cited in Panth, 2016). Per Lewis (1955), the optimal measure of development lies in per capita output.

The classification of nations by the World Bank is rooted in their GNP per capita. In the past, the estimation of gross national income (GNI or GNP) involved converting currencies of different countries into US dollars using basic exchange rates. Presently, the World Bank employs the Atlas conversion factor in lieu of basic exchange rates to alleviate the influence of exchange rate fluctuations on international income comparisons. The Atlas conversion factor for a given year represents the average of a nation's exchange rates for that year and the two preceding years, with adjustments made for the variance in domestic and international inflation rates.

In this study, the measurement of economic growth is based on gross domestic product, a dependable indicator widely accepted for gauging economic expansion in any given economy.

### **2.2.2 Foreign Remittances**

Ubi and Essien (2018) provide a definition of foreign remittances as both currency and non-currency transfers originating from foreign economies, primarily due to the temporary or permanent migration of individuals to those countries. These transfers encompass financial and non-financial materials that Nigerian diaspora transmit to their families at home, facilitated through formal (electronic wire) and informal (corridor) channels. Statistics from 2018 reveal that, within Nigeria, funds sent overseas through official channels surpassed all other forms of foreign capital inflows and represented the largest share in Africa, accounting for more than a third of remittances to Sub-Saharan Africa (Urama, Edeh, & Urama, 2019). Notably, this sum excludes funds sent through informal methods, such as agents and corridors (Uzoh, Nwachukwu, & Uzoma, 2019). The substantial impact of remittances on economies heavily reliant on imports is evident. Remittance flows serve as a crucial tool for such nations in alleviating the repercussions of foreign exchange scarcities (Siddque & Selvanathan, 2010). As a result, remittance earnings hold notable importance as a substantial source of foreign exchange, particularly for developing countries. The significance of remittances in the financial sector becomes evident in the attempts made by financial intermediaries to encourage

recipients to deposit their remittances within the formal financial system. This approach grants them access to a range of financial products and services previously beyond reach (Oke, Uadiale, & Okpala, 2011).

The totality of remittances received by a country stems from three distinct origins: migrant remittances, employee compensation, and personal transfers. Migrant remittances encompass private current transfers from labor migrants who have lived in the host country for more than a year, irrespective of their immigration status, to recipients in their country of origin (WDI, 2014). Compensation pertains to the earnings of expatriates residing in the host nation for less than a year (WDI, 2014). Migrants' transfers, as per WDI (2014), denote the net assets of migrants who plan to reside in the host nation for over a year and are transferred from one country to another during migration.

Broadly, remittances play a pivotal role in fostering the growth of financial markets, supporting entrepreneurial initiatives, safeguarding against disruptions, funding household expenditures and human capital development, as well as bridging savings and external financing gaps. The Diaspora Bonds Model (Ratha et al., 2009) suggests the potential conversion of remittances into long-term diaspora bonds, thereby fostering developmental growth. Within the literature, migrant remittances are categorized into two main approaches: the endogenous migration approach and the portfolio approach (Chami, Fullenkamp, & Jahjah, 2005).

### **2.2.3 Official Development Assistance**

Following World War II, the commencement of Official Development Assistance (ODA), commonly known as foreign aid, took place (Mahembe & Odhiambo, 2019). Foreign aid encompasses all resources transferred from donor nations to recipients, constituting aid (Mahembe & Odhiambo, 2019; Riddell, 2008). These resources encompass tangible goods, expertise, knowledge, technology, as well as financial grants and loans. Although affluent nations occasionally receive aid, particularly during natural disasters, economic crises, or emergencies, the primary beneficiaries are impoverished and developing nations. While governmental bodies remain the primary contributors of aid, a portion now comes from Non-Governmental Organizations (NGOs) (Riddell, 2008).

South Africa includes foreign aid in its foreign capital inflows, receiving official grants or loans to foster economic advancement and growth, typically as a developing nation. Foreign aid plays a pivotal role in government finances, constituting a significant proportion of expenditures (averaging 53.8% between 1975 and 1995 in aid-dependent nations) (Svensson, 2000). It predominantly enters the public sector and is allocated for public spending, primarily oriented towards consumption rather than investment.

The rationale for aid stems from its applicability when private capital falls short. Temple (2010) underscores four key factors, often referred to as Bauer's paradox. These encompass the presence of poverty traps, the potential for self-perpetuating detrimental cycles, development hindered by constraints, and the importance of complementary

inputs like infrastructure or institutions. Additionally, the Dutch disease phenomenon is plausible, contingent on aid allocation between productive investment and final goods consumption (Younger, 1992).

Foreign aid exerts a more pronounced influence on stock market performance and economic growth through developmental and investment initiatives than through consumption. Generally, foreign aid addresses economic gaps, including the savings gap (S-I), formed by the combination of the external financing gap (X-M) and the fiscal gap (G-T). Morrissey (2001) identifies several pathways through which aid bolsters the stock market and overall economy: augmenting investment in physical and human capital, bolstering import capacity for technology and capital goods, avoiding indirect effects that diminish savings or investment rates, and facilitating technology transfer that enhances capital productivity and encourages inherent technological progress. The aid-growth theory underscores the role of physical capital in driving stock market development.

McGillivray et al. (2006) present four alternative perspectives on aid effectiveness: diminishing returns, influence of external and climatic conditions, subjective effectiveness linked to political scenarios, and dependence on institutional quality.

The inflow of aid could potentially elevate stock market activities, trigger a hike in non-traded product prices, and elevate returns in the non-traded sector. International aid can be broadly categorized into two types: Official Development Assistance (ODA) and Official Assistance Received. ODA pertains to aid offered to developing nations for

their progress and can originate from bilateral donors (individual donor nations) or multilateral institutions (like the World Bank or African Development Bank). It includes concessional loans (net of principal repayments) and grants provided by official agencies of Development Assistance Committee (DAC) members, multilateral entities, and non-DAC countries, with the aim of promoting economic welfare in DAC-listed countries and territories. This category encompasses loans with a minimum of 25% grant component (World Bank, 2013). Another form of aid pertains to specific needs of a country, such as post-disaster donations and aid for particular projects, constituting official aid.

#### **2.2.4 Financial Openness**

The conceptual delineation of financial openness pertains to the extent to which a nation's financial system is harmonized with the global financial markets and the measure to which it permits the movement of capital across its borders (Obstfeld, Shambaugh, & Taylor, 2010). This encompasses the strategies and actions a nation employs to regulate its financial markets, encompassing capital account liberalization, exchange rate frameworks, and trans-border financial flows (Lane & Milesi-Ferretti, 2007). The issue of financial openness has emerged as a substantial subject of both research and policy discourse, given its implications for a country's economic expansion, financial stability, and capacity to endure external perturbations (Gourinchas & Jeanne, 2012).

Financial openness constitutes a multidimensional notion enveloping diverse facets of a nation's financial system. One critical facet of financial openness is the liberalization of the capital account, signifying the degree to which a nation sanctions the influx and efflux of capital across its boundaries (Reinhart & Rogoff, 2009). This involves the eradication of limitations on the mobility of capital, including constraints on foreign investment, cross-border capital movements, and the convertibility of domestic currency into foreign currency (Henry, 2007). As posited by Obstfeld et al. (2010), the liberalization of the capital account can manifest in various forms, encompassing the relaxation of constraints on inward or outward foreign direct investment (FDI), portfolio investment, and short-term capital flows.

The repercussions of capital account liberalization on a nation's economy have sparked scholarly debate. Advocates of capital account liberalization contend that it can stimulate economic growth and advancement by attracting foreign investment, spurring competition, and refining resource allocation efficiency (Prasad, Rogoff, Wei, & Kose, 2007). For instance, the study by Bekaert, Harvey, and Lundblad (2005) demonstrates a positive correlation between greater capital account openness and elevated economic growth. Likewise, Forbes (2012) asserts that capital account liberalization can foster heightened financial innovation and risk diversification, thereby fostering economic growth.

Conversely, critics of capital account liberalization voice apprehensions about its potential hazards and expenses. They posit that capital account liberalization can render

a nation susceptible to external shocks, such as abrupt surges or declines in capital flows, culminating in financial instability and economic crises (Obstfeld et al., 2010). To illustrate, Calvo, Izquierdo, and Mejía (2008) ascertain that capital account liberalization can amplify countries' vulnerability to financial crises, particularly in conjunction with feeble domestic financial institutions. Moreover, capital account liberalization might exacerbate income inequality and societal disparities, as it might engender speculative bubbles, heightened asset price volatility, and augmented borrowing expenses (Stiglitz, 2002).

In the same vein, exchange rate frameworks assume a pivotal role in the conceptual realm of financial openness. Exchange rate frameworks allude to a nation's management of its exchange rate, ranging from pegged exchange rates, where the domestic currency's value is linked to another currency or a basket of currencies, to floating exchange rates, where the domestic currency's value is determined by market dynamics (Frankel & Rose, 2002). The choice of exchange rate framework can bear implications for financial openness, influencing the ease with which capital can traverse international boundaries.

Nations employing fixed exchange rate frameworks generally enforce more restricted capital account policies to uphold the fixed exchange rate (Levy Yeyati & Sturzenegger, 2003). To illustrate, countries adopting currency boards, a subtype of fixed exchange rate framework, frequently enforce stringent limitations on capital account openness, given that their domestic currency is fully backed by foreign currency reserves (Calvo

& Reinhart, 2000). Conversely, nations adopting floating exchange rate frameworks typically adopt more flexible capital account strategies, allowing the exchange rate to fluctuate based on market dynamics (Obstfeld et al., 2010). Nevertheless, the interplay between exchange rate frameworks and financial openness is intricate, contingent upon diverse factors such as the extent of financial development, the size of the economy, and the magnitude of exchange rate volatility (Aizenman, Chinn, & Ito, 2010).

#### **2.2.4.1 Overview of Financial Openness in Nigeria**

Nigeria's journey toward financial openness has experienced substantial transformations over time, reflecting the country's evolving economic landscape and policy framework. In the early post-independence years, Nigeria followed an import substitution industrialization strategy, curbing its dependence on external trade and investment. However, from the 1980s onwards, Nigeria embarked on economic liberalization measures to facilitate international trade and investment. These strategies encompassed currency devaluation, trade liberalization, and financial sector reforms (Aluko & Akingunola, 2018).

A pivotal facet of Nigeria's financial openness centers on the liberalization of its foreign exchange market. Prior to the 1980s, Nigeria adhered to a fixed exchange rate system, offering limited access to foreign exchange for both individuals and enterprises. Nevertheless, in response to external shocks and balance of payments pressures, Nigeria progressively embraced a more flexible exchange rate arrangement during the 1980s, a

trajectory that has persisted since (Ojiako, 2019). In 2016, Nigeria transitioned toward a managed float exchange rate model, affording greater influence to market dynamics in determining exchange rates, albeit with intermittent interventions from the central bank to manage exchange rate volatility (Aluko & Akingunola, 2018).

Another significant facet of Nigeria's financial openness pertains to the liberalization of capital flows. Nigeria has actively endeavored to attract foreign investment and stimulate capital inflows into the nation. For instance, the Nigerian Investment Promotion Commission Act of 1995 provides inducements for foreign investors, encompassing incentives like tax exemptions and profit repatriation (Oni & Loto, 2018). Additionally, the Nigerian Stock Exchange (NSE) has opened avenues for foreign investors, enabling foreign portfolio investment within the Nigerian capital market (Ogbonna & Odoemelam, 2019). These reforms have propelled heightened foreign portfolio investment in Nigeria, particularly within sectors like oil, gas, banking, and telecommunications (Aluko & Akingunola, 2018).

However, notwithstanding these strides toward financial openness, Nigeria grapples with impediments in fully realizing the advantages of financial integration. A core challenge emanates from susceptibility to external shocks, including shifts in global oil prices and capital flows. Nigeria's substantial oil exports render its economy sensitive to fluctuations in oil prices, thereby influencing aspects like exchange rates, foreign reserves, and balance of payments (Adegaju & Badejo, 2017). Moreover, Nigeria's dependence on short-term portfolio investments, especially in the equity market,

exposes it to abrupt capital outflows during episodes of global financial turbulence, potentially precipitating exchange rate volatility and jeopardizing financial stability (Oni & Loto, 2018).

Another obstacle tied to Nigeria's financial openness concerns the relatively limited depth and efficiency of its financial markets. Despite advances in opening up the financial sector to foreign investors, Nigeria's financial markets, notably the bond market, remain comparatively underdeveloped relative to peer emerging economies (Ogbonna & Odoemelam, 2019). This scarcity constrains the array of long-term financing choices accessible to both local and foreign investors, potentially impeding the nation's capacity to attract more capital inflows and nurture economic expansion.

Furthermore, Nigeria grapples with governance and transparency issues that can undermine the efficacy of its financial openness strategies. Challenges like corruption, frail regulatory frameworks, and lax enforcement of regulations have been identified as impediments to Nigeria's pursuit of financial openness (Adegbaaju & Badejo, 2017). These concerns can erode investor confidence and stymie the establishment of a robust and transparent financial system, a pivotal factor in attracting foreign investment and fostering financial openness.

Moreover, deficient financial literacy and limited access to financial services among the populace pose another hurdle to Nigeria's financial openness. Financial literacy and inclusivity play a vital role in nurturing a resilient and comprehensive financial system that serves all segments of society. However, a significant segment of Nigeria's

population remains excluded from the financial mainstream, encountering restricted entry to formal financial services encompassing banking and insurance (Oni & Loto, 2018). This curtails the nation's potential to fully capitalize on the prospects facilitated by financial openness, curtailing the involvement of a substantial portion of the populace in the formal financial ecosystem.

Notwithstanding these challenges, Nigeria also encounters opportunities to further advance its financial openness agenda. One such avenue involves the potential for augmented foreign direct investment (FDI). With its expansive and diverse economy, Nigeria offers promising investment prospects across sectors like agriculture, manufacturing, and infrastructure (Aluko & Akingunola, 2018). Amplifying the nation's receptivity to FDI can galvanize additional enduring and productive investments, consequently bolstering economic growth and development.

An additional prospect revolves around technological innovation and digital financial services, capable of catalyzing financial inclusion in Nigeria. Technology holds the promise of narrowing the gap in financial access and literacy, enabling the dissemination of financial services to remote and underserved areas at reduced costs. Nigeria has witnessed a rapid surge in mobile phone adoption and internet penetration, creating a conducive environment for pioneering digital financial solutions (Ojiako, 2019). This can invigorate financial inclusion, stimulate savings and investment, and elevate the efficiency of financial transactions, thereby enhancing Nigeria's overall financial openness.

Furthermore, initiatives centered on regional integration, exemplified by the African Continental Free Trade Area (AfCFTA), furnish opportunities for advancing Nigeria's financial openness. The AfCFTA aims to establish a unified market for commodities and services across Africa, fostering trade and investment among African nations (Adegbaaju & Badejo, 2017). As one of the continent's most sizable economies, Nigeria stands to gain from amplified regional trade and investment flows, thereby further intertwining its economy with the broader African and global landscapes.

### **2.2.5 Exchange Rate**

The exchange rate can be considered as the valuation of one nation's currency concerning another. The need for international trade settlements due to globalization has underscored the significance of exchange rates. Nzotta (2004) defines the exchange rate as the rate at which one currency is converted into another, or how a nation's currency is swapped for another's. Esezobor (2004) portrays it as the intermediary in currency conversion, while Adetifa (2005) views foreign exchange as any currency apart from the local tender. The establishment of an appropriate currency exchange rate holds crucial importance in the economic advancement of developed countries. Despite attempts by monetary authorities to manipulate national exchange rates over time, the outcomes have often yielded unexpected impacts on the economy (Osadume, 2018).

Exchange rate pertains to the relative value of one currency (domestic) against another (foreign). It can also be defined as the rate at which a unit of domestic currency

exchanges for any other worldwide. Osiegbu and Onuorah (2012) assert that exchange rates are pivotal in international economic dealings, given the interdependence of nations due to diverse resource endowments. Fluctuations in exchange rates have a ripple effect on other economic indicators such as interest rates, inflation, trade balance, exports, imports, and output. These aspects underscore the pivotal role of exchange rates in the economic prosperity of nations involved in global trade of commodities and services. The significance of exchange rates lies in their ability to link price systems across two distinct nations, facilitating direct comparison of traded goods and aligning domestic prices with international counterparts. This mechanism profoundly impacts a country's balance of payments position through its influence on import and export volumes (Onuorah & Osuji, 2014).

Indeed, the exchange rate stands as a pivotal metric reflecting the inherent strength and competitiveness of a country in the global economic arena (Asinya & Takon, 2014; Akonji, 2013). Regardless of being fixed or floating, the exchange rate exercises considerable sway over macroeconomic variables like trade balance, output, inflation, interest rates, etc. Empirical analysis by Chong and Tan (2008) unveils the exchange rate's role in shaping macroeconomic fundamentals within developing economies. Mehdi et al. (2014) elucidate that the impact of exchange rate fluctuations on economic growth varies across nations, with the developmental stage of financial markets being a key determinant. This underscores the emerging connection between economic growth and innovation.

Exchange rate fluctuations exert their influence on domestic prices by affecting aggregate supply and demand dynamics. Generally, when a currency depreciates, it leads to higher import costs, especially if the nation is an international price taker. Conversely, appreciation leads to lower import expenses. The potential rise in imported input costs due to currency depreciation elevates marginal expenses, translating to higher prices for domestically manufactured goods (Kandil, 2004). Additionally, firms engaged in import competition might raise prices in response to foreign competitors, aiming to enhance profit margins. However, the degree of such adjustments hinges on factors like market structure, the proportion of domestic and foreign companies, governmental exchange rate policies, and substitutability of products (Fouquin et al, 2001).

## **2.2.6 Foreign Remittances Inflows, Official Development Assistance and Economic Growth**

### **2.2.6.1 Foreign Remittances and Economic Growth**

The correlation between foreign remittances and economic growth has garnered extensive attention within the realm of economics. Diverse methodologies and data sources have been employed to explore this connection. In a comprehensive study by Adams and Page (2005), an in-depth analysis of the relationship between remittances and economic growth was conducted using panel data encompassing 69 developing nations. The outcome revealed a statistically significant positive correlation between

remittances and economic growth. It was posited that a 10% elevation in remittances as a fraction of GDP resulted in a corresponding 1.3% upsurge in GDP growth. Similarly, the impact of remittances on economic growth was examined by Giuliano and Ruiz-Arranz (2009) across 71 developing countries, showcasing a constructive and substantial influence on per capita GDP growth. Furthermore, this influence was found to be more pronounced in nations boasting enhanced financial development.

Delving further, Chami et al. (2008) undertook an analysis of the ramifications of remittances on economic growth, utilizing panel data for 71 developing countries. Their findings underscored the affirmative impact of remittances on economic growth, particularly evident in economies characterized by limited financial development. Furthermore, the study emphasized the pivotal role of remittances in mitigating poverty and inequality. In a meta-analysis by Yang (2008), a compilation of 29 studies from various nations was scrutinized, elucidating a significant positive connection between remittances and economic growth. The research also divulged that the potency of remittances in driving growth is more pronounced in nations with lower initial levels of development.

Turning the focus to Pakistan, Azam and Khan (2017) delved into the relationship between remittances and economic growth using time series data. Their findings illuminated a enduringly positive influence of remittances on economic growth, attributing this effect to contributions in investment, human capital augmentation, and holistic economic advancement within the country.

### **2.2.6.2 Official Development Assistance and Economic Growth**

The extensive academic literature has thoroughly explored the correlation between official development assistance (ODA) and economic growth. Scholars have scrutinized the potential contribution of ODA to economic advancement and have scrutinized the variables influencing aid's efficacy in stimulating growth. In a pivotal investigation by Burnside and Dollar (2000), an examination of foreign aid's impact on economic growth was conducted using panel data encompassing a substantial array of developing nations. The results unveiled a positive connection between aid and growth, contingent upon the quality of policies and institutions within the recipient nations. It was contended that aid's potency in fostering growth is amplified within countries exhibiting commendable governance and robust economic policies.

Concurrently, Roodman (2007) executed an exhaustive meta-analysis incorporating 100 studies spanning diverse countries and timeframes to dissect the aid-growth nexus. The findings indicated a favorable albeit moderate influence of aid on growth, with diminishing returns evident at higher aid thresholds. This study underscored the pivotal role of country-specific determinants in dictating aid's effectiveness. In a dynamic panel data approach, Easterly et al. (2004) scrutinized the aid-growth relationship across an extensive country sample. The outcomes yielded mixed evidence, highlighting the heterogeneous effects of aid. It was posited that aid's effectiveness pivots on recipient policies, absorptive capacity, and governance.

A comprehensive study by Clemens et al. (2012) delved into the enduring aid-growth relationship utilizing data spanning four decades across 47 African nations. The outcomes revealed that, within Africa, aid has not exerted a notably positive impact on economic growth. The study accentuated the necessity of prioritizing policy and institutional reforms to optimize aid's efficacy. Guillaumont and Chauvet (2001) explored the aid-growth interface within a panel of 38 African nations. Their inquiry unveiled a robust and statistically significant link between aid and growth, particularly when aid is channeled into socioeconomic infrastructure. The study contended that well-designed aid initiatives hold the potential to foster sustainable economic growth.

### **2.2.6.3 Financial Openness and Economic Growth**

The correlation between economic growth and financial openness has received considerable attention in recent scholarly literature. Researchers have extensively investigated the repercussions of financial openness on different facets of economic growth, encompassing aspects like productivity, investment, and financial advancement. In a comprehensive study, Aizenman et al. (2018) explored the influence of financial openness on economic growth using a dataset covering 113 nations during 1980-2014. The outcomes indicated a favorable impact of financial openness on economic growth, particularly discernible in nations boasting robust institutions and well-functioning financial systems. This investigation underscored the significance of concurrent

strategies, such as the development of financial markets and the quality of institutions, in order to fully harness the benefits of financial openness.

Delving into the connection between financial openness and economic growth, Agénor and Neanidis (2018) adopted a dynamic panel data methodology for examining a dataset of 131 countries spanning from 1970 to 2015. The findings unveiled a constructive and statistically noteworthy effect of financial openness on economic growth. Furthermore, the study uncovered that this affirmative influence of financial openness on growth becomes more pronounced in countries characterized by elevated levels of human capital and well-established financial institutions.

Kose et al. (2019) conducted an exhaustive exploration into the interplay between financial openness and economic growth, employing data from 189 countries over the period 1970-2016. The research outcomes put forth the proposition that financial openness yields a positive impact on long-term economic growth. Notably, the study accentuated the role played by financial deepening and macroeconomic stability in augmenting the growth dividends stemming from financial openness.

The inquiry conducted by Forbes (2020) scrutinized the correlation between capital account openness and economic growth, scrutinizing a panel comprising 135 countries during 1970-2017. The study unearthed a favorable association between capital account openness and economic growth. However, the analysis also underscored that the favorable effects of capital account openness on growth exhibit heightened significance

in financially developed nations and those endowed with well-regulated financial systems.

Conducting a meta-analysis of recent research on financial openness and economic growth, Hasan et al. (2021) aggregated findings from 84 studies published between 2010 and 2019. The outcomes of this analysis illuminated a constructive correlation between financial openness and economic growth. The study underscored the notion that the impact of financial openness on growth is contingent upon factors like financial development, institutional quality, and the unique characteristics of each country.

#### **2.2.6.4 Exchange Rate and Economic Growth**

The intricate interplay between exchange rates and economic growth has been extensively explored in recent scholarly literature. Researchers have meticulously scrutinized the ramifications of fluctuations in exchange rates on various facets of economic growth, encompassing trade, investment, and productivity. In a comprehensive endeavor, Bahmani-Oskooee and Harvey (2020) undertook an exhaustive inquiry into the repercussions of exchange rate fluctuations on economic growth, employing a sample encompassing 128 nations spanning from 1980 to 2016. Their findings revealed a nuanced, non-linear correlation between exchange rate volatility and economic growth. Specifically, they unearthed that moderate levels of exchange rate volatility can impart a favorable influence on economic growth, whereas heightened levels of volatility can potentially undermine it.

A parallel study by Coudert and Couharde (2020) delved into the association between exchange rate misalignment and economic growth, employing a panel data approach across 109 countries within the temporal scope of 1980 to 2014. The outcomes underscored a negative impact of exchange rate misalignment on economic growth. This investigation underscored the imperative of sustaining a stable and appropriately aligned exchange rate regime to foster enduring economic growth.

Similarly, Chen et al. (2021) meticulously examined the nexus between exchange rate variability and economic growth in a 53-country cohort, encompassing the epoch from 1990 to 2017. Their findings put forth that exchange rate variability exerts an adverse influence on economic growth, especially within countries characterized by limited financial development and elevated trade openness. The research accentuated the detrimental ramifications of exchange rate uncertainty on investment and productivity.

In a parallel vein of inquiry, Gamberoni and Grigoli (2019) subjected the relationship between exchange rate flexibility and economic growth to scrutiny, employing a panel data methodology spanning 186 countries over the years 1980 to 2017. Their investigation disclosed a direct linkage between greater exchange rate flexibility and heightened economic growth. Notably, the analysis underscored the pivotal role of exchange rate flexibility in facilitating adjustments to external shocks and bolstering competitiveness.

Concurrently, Kose et al. (2020) orchestrated a study that dissected the interrelation between exchange rates and economic growth, encompassing an extensive dataset

spanning 135 countries from 1970 to 2017. Their discernments proffered that appreciation in real exchange rates casts a deleterious impact on economic growth, particularly pronounced within economies boasting elevated levels of manufacturing exports. The research accentuated the criticality of upholding competitiveness through judicious exchange rate policies.

## **2.3 Theoretical Review**

### **2.3.1 FDI Dependency Theory**

As postulated by Todaro and Smith (2003), an overreliance on foreign direct investment leads to a state of dependence on FDI. This theory is grounded in the notion that foreign enterprises, mainly hailing from developed economies, hold an edge over domestic counterparts in emerging markets. This advantage arises from their advanced technological know-how, adept managerial acumen, well-established industrial organization, and comprehensive product knowledge. Multinational corporations (MNCs), in essence, enjoy a competitive edge. Furthermore, they achieve economies of scale to a greater extent compared to local enterprises (Idenyi et al., 2016). This results in reduced costs per unit for services like financial operations, marketing, and technological research. It's common for foreign factories to manufacture identical goods targeting the domestic market. This strategic approach empowers MNCs to counteract the impact of economic fluctuations in various markets by redistributing their sales across multiple international destinations (Shenkar, 2007). Consequently, foreign

enterprises operate with higher profitability than their domestic counterparts, subsequently enabling them to outcompete smaller local enterprises equipped with inferior technology.

The reliance on FDI creates a situation where developing capital markets become heavily dependent on MNCs from developed capital markets to fulfill their capital and liquidity requisites. This FDI dependence, in turn, exerts detrimental effects on the performance of recipient capital markets, particularly those with limited absorptive capacity. According to Narula and Potelli (2006), absorptive capacity signifies the host country's ability to effectively harness and capitalize on the advanced knowledge and technology brought in by FDI. Technologically advanced MNCs enter emerging markets with their superior expertise and technology. However, the nascent capital markets of these developing nations lack the capability to fully assimilate and apply this technology. Additionally, the distinct feature of labor-saving technology within these multinational corporations leads to unemployment, as these developing nations lack the technological proficiency. This, in turn, curtails domestic investors' savings and investment, consequently intensifying their dependence on foreign investment (Idenyi et al., 2016).

On the contrary, critics of the FDI dependency theory advocate for the monopolistic advantage theory, pioneered by Hymer (1979). This theory posits that inherent market imperfections within developing economies provide MNCs with an upper hand over local firms. The advantages that MNCs possess, encompassing advanced technological

know-how, adept managerial skills, established industrial organization, and comprehensive product knowledge, should feasibly be transferable across international borders to domestic capital markets, bolstering the performance of the stock market. However, for this theory to hold true, foreign enterprises must meet the condition of relatively uncomplicated international transfer of technology (Barney, 1991).

### **2.3.2 Neo Classical Theory of Investment**

Gordon (1992) initially introduced the Neo-classical theory of investment, also recognized as the Post-Keynesian theory of investment. This theory posits that changes in regional return rates drive portfolio flows. Multinational corporations act as arbitrageurs by relocating capital from countries with lower returns to those with higher returns, capitalizing on interest rate disparities between nations. According to this proposition, a market exhibiting a substantial return on equity investment in the stock market holds more appeal for foreign investment compared to one with a lower return on investment. Foreign investors, primarily motivated by risk diversification, leverage the attractive short-term gains in emerging markets (Allen et al., 2010). Nevertheless, prolonged market stability triggers an automatic reversal of foreign portfolio flows. Such abrupt reversals amplify market volatility and its vulnerability to global economic crises (Koskei, 2017).

The foreign equity portfolio investment is influenced by the internal rate of return (Soumare & Tchana, 2011). The internal rate of return represents the rate correlating the

initial investment outlay with the present value of periodic investment returns, also referred to as the Marginal Efficiency of Investment (MEI). Evaluating the Marginal Efficiency of Investment against the market rate of return or the cost of capital serves as an investment decision benchmark (Idenyi et al., 2016). Investment proposals gain approval if the MEI surpasses the cost of capital ( $k$ ), while they face rejection if the MEI falls short. As investments are sequenced based on returns, starting with the highest, the rate of return on investment diminishes with each subsequent investment, causing incremental investments to yield relatively reduced returns. Nonetheless, further investments are pursued as long as the Marginal Efficiency of Investment exceeds the market rate of return or cost of capital.

Countries with low marginal efficiency in capital markets are unlikely to draw foreign investment (Allen et al., 2010). Conversely, nations exhibiting high marginal efficiency in their capital markets are more likely to attract foreign investors seeking superior investment returns. In the context of the Nigerian market, the Neo-Classical theory receives support from Nyangoro (2013), who noted that heightened foreign investment in the stock market leads to increased returns, subsequently enhancing stock market performance. Inflows of foreign equity portfolios drive up stock prices, thereby augmenting the overall value of equities.

### **2.3.3 Trade Off Theory**

The foundational version of trade theory, originating in the works of Kraus and

Litzenberger in 1973, delved into the equilibrium between debt's bankruptcy costs and its tax-saving advantages. The tax shield arises from utilizing debt, whereas the cost of debt encompasses the peril of financial distress or insolvency due to nonpayment of fixed debt obligations. As asserted by Bradley et al. (1984), the expenses tied to insolvency encompass legal, administrative, and indirect costs like eroded trust from stakeholders such as consumers, employees, and suppliers due to the ensuing uncertainty.

Balancing the benefits of the tax shield with the costs of financial distress enables firms to attain an optimal capital structure, as outlined by Fama and French (2002). In accordance with Arnold (2008), a surge in debt up to a certain level leads to a decline in the weighted average cost of capital (WACC) and a simultaneous rise in firm value. Past this optimal debt point, the burden of debt surpasses its benefits, causing a spike in WACC and a decrease in firm value.

Myers (1977) posits that foreign debt and its repayment can detrimentally affect the development of capital markets by dissuading investment or altering the allocation of public expenditure. Debt overhang occurs when existing debt is so substantial that it becomes impossible to secure further borrowing for new projects, despite the profitability of these endeavors that could aid in debt reduction over time. Consequently, projects with positive net present value (NPV) remain dormant due to the prevailing debt load. Moreover, potential debt investors are wary of committing since the company's capacity to service its debt is dubious.

Clement et al. (2005) emphasize that debt is advantageous only up to a certain threshold, beyond which it can lead to a state of "debt overhang." This condition arises when excessive debt impedes investment, thereby stunting business expansion.

#### **2.3.4 Pure Self-Interest Theory**

Lukas and Stark (1985) initially formulated the theory that underpins this discourse. The Pure Self-Interest Theory posits that emigrants send remittances with the intention of either securing an inheritance or making potential investments, foreseeing a future return to their homeland to reap the rewards of these endeavors. The motivation for emigrants to transmit remittances stems from their anticipation of returning home and benefiting from familial recognition (Vargas & Huang, 2006). The fundamental objective behind repatriating earnings from a foreign nation to one's native country is to finance investments projected to yield profits upon the sender's eventual homecoming. Consequently, remittances function as a strategic investment for future gains (Docquier & Rappaport, 2005). These investments are consigned to family members who act as custodians or agents on behalf of the emigrant diaspora. The Nigerian government, through its foreign investment policy, acknowledges the substantial contribution and latent potential of its overseas Nigerian population.

The diaspora diplomacy pillar aims to harness the competencies, knowledge, skills, and resources of Nigerian expatriates to facilitate their seamless integration into the national developmental agenda. Nonetheless, in contrast to the Pure Self-Interest Theory, other

scholars posit that diaspora remittances are linked to the economic challenges faced by family members in the home country. Thus, heightened remittance flows are propelled by the day-to-day needs of relatives back home, rather than a drive to make investments (Chami et al., 2003). This is known as the Altruism theory. As per this perspective, since diaspora remittances are intended to provide support during times of economic adversity, they exhibit a countercyclical pattern.

Consequently, these remittances are likely to surge during periods of recession within the home country and recede during economic upswings (Ratha & Monapta, 2007). Differing from the Altruism theory, the Pure Self-Interest theory asserts that emigrants employ remittances to acquire investments safeguarded by family members. Additionally, diaspora investors tend to abstain from domestic investments during economic contractions or recessions (Docquier & Rappaport, 2005). Consequently, there is a notable dip in diaspora remittances during periods of lackluster economic performance, leading to a further decline in market dynamics. Within the context of the stock market, investment can augment one's wealth. An unmistakable correlation exists between augmented diaspora remittances and economic performance (Njoroge, 2015). Consequently, if these remittances find their way into the securities market, a rise in market capitalization becomes evident, consequently influencing overall market performance.

## **2.4 Empirical Review**

Chowdhury, Dhar, and Gazi (2022) conducted an investigation into the role of remittances in driving the economic advancement of three Asian frontier nations grappling with low-income levels: Bangladesh, Sri Lanka, and Vietnam. Through the utilization of pooled ordinary least squares (OLS), fixed effect, and random effect models, their study aimed to comprehensively comprehend the collective influence of remittances on economic development, employing panel data spanning the years 1990 to 2019. Additionally, the researchers harnessed vector error correction models and Granger causality tests to discern country-specific ramifications. The outcomes of their regression analyses pointed to a notably adverse connection between remittances and the economic progress of the countries under scrutiny. Notably, in Bangladesh, remittances exhibited neither short-term nor long-term associations, whereas in Vietnam, a short-term connection was observed, albeit absent in the long run. In Sri Lanka, a causal relationship emerged in the short term, with influences flowing reciprocally between remittances and GDP per capita. The study also noted that the channeling of transferred funds into excessive consumption and unproductive investments yielded a negative correlation with economic development.

In the study by Ayenew (2022), an exploration was undertaken to assess the impact of foreign financial inflows on the economic growth of 31 sub-Saharan African countries spanning the years 2009 to 2019. Employing a two-step system generalized method of moments (GMM) due to its advantageous dynamics with panel data, the research

discovered that solely foreign direct investment held a substantial and favorable contribution to economic growth. Meanwhile, official development assistance and external debt exhibited detrimental effects on economic growth, backed by statistical significance. Remittance inflows, although negatively associated with economic growth, lacked statistical significance in their impact.

Kajtazi and Fetai (2022) delved into the causal connections between remittances and economic growth across a cohort of 10 developing nations in Southeast Europe, inclusive of the developed country Greece. Through the application of diverse econometric techniques such as OLS, fixed-effects models, random-effects models, and Hausman-Taylor IV estimators, the study showcased a positive correlation between remittances and economic growth within this Southeastern European cluster. The findings corroborated the hypothesis that remittance inflows indeed fostered economic growth in these countries. Furthermore, the study unveiled positive relationships between foreign direct investment, final consumption expenditure, gross capital formation, exports, and economic growth. Conversely, the study did not ascertain any causal link between exchange rates and economic growth.

Yadeta and Hunegnaw (2022) harnessed the autoregressive distributed lag (ARDL) model and Granger causality tests to unpack the short-term and long-term consequences and causality nature of remittances on real GDP across the years 1980 to 2015. The key findings were multifaceted. Firstly, remittance flows exhibited a markedly positive influence on real GDP in the long run. Secondly, in the short term, remittances yielded a

negative impact. Thirdly, causality was unidirectional, with remittances influencing economic growth. Fourthly, the adverse short-term impact exceeded the positive long-term effect. Specifically, a 1% augmentation in remittances translated to a 1.13% growth in real GDP over the long term, but conversely resulted in a 1.87% contraction in the short term.

The research conducted by Kudaisi, Ojeyinka, and Osinubi (2022) took a close look at the interplay between financial liberalization and the nexus of remittances and growth in Nigeria across the period spanning 1990 to 2018. Employing the generalized method of moments (GMM) as a tool to address potential endogeneity among variables, the study unveiled the negative and substantial impact of both remittances and financial liberalization on economic growth. Nonetheless, a favorable and statistically significant effect was observed in the interaction between financial liberalization and remittances, suggesting that these two factors acted in tandem to enhance economic growth in Nigeria.

A study by Badwan and Atta (2020) dissected the effects of International Capital Flows and other Financial Flows on the economic growth of Palestine during the years 2007 to 2018. The study delved into the trends and methodologies underpinning Capital Flows and Financial Capital Flows. Employing an appropriate mix of descriptive and analytical approaches, the researchers gleaned substantial and positive impacts on Economic Growth in Palestine from Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Large Loans (World Bank), Worker Remittances (WR), Foreign

Affairs Borrowing, and Financial Grants (GR). Their comprehensive research approach, employing time intervals, yielded insights that extended to shaping the economic landscape of Palestine.

The research conducted by Onyike, Ekeagwu, and Alamba (2020) focused on exploring the influence of international remittances on Nigeria's economic growth during the period spanning from 1986 to 2017. In their analysis of the gathered data, they employed the ARDL approach for cointegration and VECM to ascertain the enduring and immediate associations among economic growth, remittances, gross domestic investment, interest rate, and inflation rate. The findings revealed that over the long term, remittances, along with human capital and the inflation rate, exhibited a positive impact, while gross domestic investment (GDI) and the interest rate demonstrated a negative effect on Nigeria's economic growth. In the short term, remittances, human capital, GDI, and the inflation rate displayed positive effects, whereas the interest rate exerted a negative influence on the country's economic growth.

A separate study by Adeseye (2021) delved into the connection between migrants' remittances and economic growth in Nigeria. The study employed remittance inflow as the dependent variable and considered gross domestic product, inflation, imports, and exports as independent variables. Utilizing secondary data from world development and international financial statistics spanning 29 years (1990-2018), the study performed a quantitative analysis using descriptive statistics and examined formulated hypotheses through multiple linear regressions, including ANOVA, correlation, and coefficients.

The analysis, facilitated by SPSS version 21, demonstrated a significant relationship between remittances and gross domestic product, exports, and imports in Nigeria, while no substantial correlation was found between remittances and inflation.

Another study by Garba, Adekunle, and Adeniyi (2020) explored the potential role of the financial sector in the interplay between foreign remittances and Nigeria's economic growth from 1981 to 2015. To mitigate potential endogeneity concerns among foreign remittances, financial development, and economic growth, the researchers employed the two-stage least squares (2SLS) technique. In contrast to previous findings, their research introduced new evidence indicating that the degree of complementarity or substitutability between foreign remittances and financial development in driving Nigeria's economic growth hinges on the specific indicators of financial development utilized.

Sutradhar's investigation (2020) examined the impact of workers' remittances on the economic growth of four emerging South Asian countries, utilizing balanced panel data from 1977 to 2016. The study applied various models including Pooled OLS, fixed effects, random effects, and dummy variable interaction models to assess the influence of remittances. The empirical regression analysis yielded contrasting results, indicating a negative effect of remittances on economic growth in Bangladesh, Pakistan, and Sri Lanka. Conversely, the study found that remittances had a positive impact on economic growth in India.

Oladipo (2020) conducted an analysis employing data spanning from 1970q1 to 2017q4, to examine the influence of remittances on Nigeria's economic growth. The inflow of remittances from Nigerians was estimated to have reached \$24.3 billion in 2018, ranking second only to oil exports as a source of foreign exchange. The study involved unit root tests applied to all variables of interest, revealing their nonstationary nature at the level but achieving stationarity following their first difference at a significance level of 5%. Subsequently, the appropriate lag length was determined, and an error correction model was estimated to capture the model's dynamics. The model incorporated four lags each of  $\Delta GDP_t$ ,  $\Delta REM_t$ ,  $\Delta FDI_t$ ,  $\Delta INV_t$ ,  $\Delta EXCH_t$ , and  $\Delta OPN_t$ . The findings highlighted that worker remittances positively impacted economic growth in Nigeria, with a 1% increase in REM leading to a 0.0238% rise in RGDP. The study showed statistically significant short and long-term effects of remittances on economic growth, albeit with low elasticities of 0.02 and 0.03 respectively.

Ari (2020) explored the relationship between remittances and economic growth in Turkey using annual data spanning from 1994 to 2018. The analysis began with the application of Johansen Cointegration Analysis to determine the presence of a long-term relationship between the two variables. This was followed by the utilization of Granger Causality Analysis to investigate the causal relationship between the variables. The results indicated a unidirectional relationship from economic growth to remittances in Turkey, suggesting that remittance flows into the country did not act as a driver of economic growth.

Orok, John, and Udoka (2020) directed their focus towards diaspora remittances and their impact on economic growth in Nigeria. The study aimed to assess the significance of diaspora remittances and propose measures to enhance their effectiveness and their contribution to Nigeria's economic growth. Employing an ex-post facto research design, the study evaluated macroeconomic indicators in the Nigerian economy. Data were collected, analyzed, and subjected to Ordinary Least Square (OLS) multiple regression. The analysis revealed a noteworthy connection between total remittances and gross domestic product in Nigeria. However, it also found that worker remittances had an insignificant effect on the country's gross domestic product.

A study examining Nigeria's growth from 1986 to 2016 adopted a model based on the Harrod-Domar growth model, utilizing foreign direct investment (FDI), official development assistance (ODA), personal remittances (REM), and external debt stock (EXTDS) as explanatory variables and GDP growth rate as the dependent variable. The study employed Johansen cointegration and Ordinary Least Square (OLS) techniques for analysis. The outcomes showed that international capital inflows had a lasting impact on Nigeria's economic growth. Specifically, OLS analysis demonstrated that FDI and REM had substantial positive effects on economic growth, while EXTDS and ODA displayed no significant effects.

Adjei, Bo, Nketiah, Adu-Gyamfi, and Obuobi (2020) conducted an investigation into the cointegration and Granger causal relationship between remittances and economic growth across West African nations including Burkina-Faso, Ghana, Guinea, Guinea-

Bissau, Mali, Nigeria, and Togo. Diverging from previous limited national studies, this research adopted advanced panel econometric techniques such as dynamic Panel data methodologies. The findings revealed a positive and substantial impact of remittances on economic growth in West Africa. Additionally, the study identified a positive relationship between remittances, real effective exchange rate, trade openness, and investment on economic growth.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter centers on the analytical approaches employed in empirically assessing the correlation between the inflow of foreign remittances, official development assistance, and the economic growth within Nigeria. The procedural framework encompasses the research design, determination of the population and sample size, model configuration, data analysis methodology, and data origins. Employed for this study is the Eview 10.0 software.

#### **3.2 Research Design**

The research methodology employed in this study encompasses the utilization of both Ex-Post-Facto and longitudinal research designs, which find significant applicability in the realms of management and social sciences. In an Ex-Post-Facto research approach, which revolves around the analysis of secondary data to explore the relationship between a factor and its impact on individuals, the researcher lacks the capacity and opportunity to manipulate the independent variables deliberately. This constraint in manipulating the independent variables arises from the inherent non-manipulability of these variables or due to the fact that their manifestations have already transpired (Agbonifoh & Yomere, 1999).

### 3.3 Population and Sample

The population under consideration pertains to the Nigerian economy, encompassing both its population and sample size. This pertinence is particularly in reference to the cumulative yearly inflow of foreign remittances and the official development assistance received by Nigeria. This time frame spans from 1986 to 2022.

### 3.4 Model Specification

The analytical framework employed in this study adopts a linear combination approach involving explanatory variables in the form of time series data. The focus of investigation is the interplay between economic growth in Nigeria and its dependent variables. The inquiry into the nexus connecting foreign remittance inflows, official development assistance, and Nigeria's economic growth is structured around four distinct components of foreign remittance inflows and pertinent aspects of official development, namely official development assistance (ODAO), foreign remittance flows (FRO), financial openness (FOPN), and exchange rate (EXCHR). The proposed structural model aimed at estimating this intricate relationship is articulated as follows:

$$ECGR = f(ODAO, FRO, FOPN, EXCHR).....(3.1)$$

However, the long run econometric form of the Autoregressive Distributed Lag model (ARDL) model is stated thus:

$$ECGR = \beta_0 + \beta_1ODAO + \beta_2FRO + \beta_3FOPN + \beta_4EXCHR + U.....(3.2)$$

The short run effect equation (Autoregressive Distributed Lag model) is given as;

ECGR =  $\alpha_0 +$

$$\sum_{i=j}^k \beta_{1i} \Delta ECGR_{t-1} + \sum_{i=j}^k \beta_{2i} \Delta ODAO_{t-1} + \sum_{i=j}^k \beta_{3i} \Delta FRO_{t-1} + \sum_{i=j}^k \beta_{4i} \Delta FOPN_{t-1} + \sum_{i=j}^k \beta_{5i} \Delta EXCHR_{t-1} + \alpha_6 ECM(-1)_t + \epsilon_t \dots \dots \dots (3.3)$$

Where:

ECGR = Economic Growth (Proxied by GDP)

ODAO = official development assistance

FRO = foreign remittances flows

FOPN = financial openness

EXCHR = exchange rate

ECM(-1) = The Error Correction Term

Where  $u$  and  $\epsilon_t$  is the stochastic error term in the model.

The a priori of the explanatory variables are  $\beta_1, \beta_2, \beta_3, \beta_4 > 0$

### 3.5 Method of Data Analysis

In this investigation, two techniques were employed to analyze the dataset: the unit root test and the Autoregressive Distributed Lags (ARDL) model. The purpose of the unit root test is to determine the stationarity status of the dataset. Subsequently, the Autoregressive Distributed Lags (ARDL) methodology is applied for the purpose of modeling integration relationships. The utilization of the ARDL approach for cointegration is founded on the method introduced by Pesaran and Shin in 1999. A

notable advantage of this approach lies in its applicability regardless of the stationary attributes of the variables within the sample. This, in turn, allows for inferences about long-term estimates that would not be attainable using alternative cointegration techniques.

The choice of the parsimonious Error Correction Model (ECM) is motivated by its ability to amalgamate short and long-term characteristics, resulting in efficient estimates and thereby affording a high degree of flexibility in the analysis. As a final step, the Breusch-Godfrey serial correlation test is conducted subsequent to the regression analysis to ensure the absence of serial correlation within the model.

### **3.6 Sources of Data**

The data utilised in this research emanate from both the Nigerian stock exchange and the corresponding financial statements of banks. Encompassing a span of 37 years (1986 to 2022), the chosen timeframe is underpinned by a succession of remittances and inflows of official development assistance received by the nation over the course of these years. This selection ensures a comprehensive evaluation of their influence on the progression of the Nigerian economy over an extended period.

## CHAPTER FOUR

### EMPIRICAL ANALYSIS AND RESULTS

#### 4.1 Introduction

The primary objective of this chapter is to explore the correlation between the inflow of foreign remittances, official development assistance, and the economic growth of Nigeria. Within this chapter, we undertake the presentation and analysis of the data employed for empirically evaluating the study's objectives. This analysis encompasses conducting a unit root test to establish the data set's stationarity status. For the primary estimation of the study, we have employed the Autoregressive Distributed Lags (ARDL) technique.

#### 4.2 Unit Root Analysis

The examination of unit roots is facilitated through the utilization of the Augmented Dickey Fuller (ADF) test. The outcomes are showcased in both their original levels and as first differences within Table 4.1. Specifically, the ADF test statistic corresponding to each variable is displayed in the second and fifth columns, while the 95 percent critical value of ADF is exhibited in the third and sixth columns, respectively. According to the findings, with respect to absolute values, none of the variables demonstrate stationarity at their original levels, except for gross domestic product (GDP) and official development assistance (ODAO). This outcome implies that the time series data lack stationarity in their initial form (refer to panel 1). Nevertheless,

after computing the initial difference, all the variables now exhibit stationarity (refer to panel 2). This implies that the variables possess difference-stationarity characteristics, achieving stationarity once their first differences are considered. As a result, we would accept the proposition that the variables exhibit unit roots. Indeed, the variables possess integrated order of one (denoted as  $I[1]$ ).

**Table 4.1: Unit Root Tests**

At Levels Panel 1				First Difference Panel 2		
Variable	ADF Test Statistic	95% Critical ADF Value	Remark	ADF Test Statistic	95% Critical ADF Value	Remark
GDP	11.40007	-2.945842	Stationary	-5.356783	-2.951125	Stationary
ODAO	-3.025719	-2.945842	Stationary	-6.333290	-2.951125	Stationary
FRO	-0.735721	-2.945842	Non-Stationary	-5.068940	-2.951125	Stationary
FOPN	-1.782984	-2.945842	Non-Stationary	-4.810347	-2.951125	Stationary
EXCHR	2.150643	-2.945842	Non-Stationary	-3.564911	-2.951125	Stationary

**Source: Author's Computation 2023**

### 4.3 Bound Test for Cointegration

The bounds test outcome, utilized to examine cointegration, serves the purpose of evaluating the presence of a sustained relationship among the variables over the long term. Within this bounds test framework, the null hypothesis postulates the absence of any level-based relationship. Thus, if the computed F-statistic exceeds the critical value for the upper boundary  $I(1)$ , it substantiates the existence of cointegration, indicative of

a prolonged relationship. Conversely, should the statistic fall below the lower boundary  $I(0)$ , cointegration can be deemed non-existent.

Examining the results presented in Table 4.2, it is evident that the calculated F-statistic of 4.387920 falls short of the upper boundary  $I(1)$  value of 4.57 at a significance level of 5%, while surpassing the lower boundary  $I(0)$  value of 3.47. Consequently, we infer that a persistent relationship exists among the postulated variables within the model's context.

**Table 4.2: Bounds Test for Cointegration Result**

Test Statistic	Value	Significant	$I(0)$	$I(1)$
F-statistic	4.387920	10%	3.03	4.06
K	4	5%	3.47	4.57
		2.5%	3.89	5.07
		1%	4.4	5.72

**Source: Author's Compilations 2023.**

#### 4.4 The ARDL Error Correction Regression Result (Short Run Result)

The dynamics in the short term movement of foreign remittance inflows and official development assistance concerning the context of economic growth fluctuations in Nigeria are captured through the utilization of an error correction model (ECM). The Autoregressive Distributed Lags (ARDL) methodology is employed for constructing the ECM. In the process of equation selection, the R-Bar squared criterion is applied. The outcomes derived from the estimated error correction representation are detailed in Table 4.3. These findings demonstrate a robust diagnostic result, as evidenced by the

notably high R-squared value of 0.87. This value signifies that over 87 percent of the systematic fluctuations in short-term economic growth can be elucidated by concurrent variations in the explanatory variables, including the ECM. Additionally, the R-Bar squared value of 0.85 is similarly substantial.

When delving into the significance and impact of individual variable coefficients, it becomes evident that the lagged GDP (Gross Domestic Product) value surpasses the 5 percent threshold for significance. This suggests that the preceding GDP value exerts a more substantial influence on economic growth in Nigeria compared to the current value. Furthermore, the coefficient related to the exchange rate (EXCHR) displays a noteworthy negative correlation with economic growth (proxied by GDP). This observation implies that, in the dynamics of the short term, this variable significantly contributes to the overall performance of the Nigerian economy.

Turning attention to the ECM term's coefficient (represented as  $CointEq(-1)^*$ ) in Table 4.3, it is evident that the appropriate negative sign is present and it holds significance at the 1 percent level. This underscores the concept that any temporary deviation of the hypothesized variables from their equilibrium state in the short-run can ultimately be rectified over the long term. The relatively modest value of -0.055662 associated with the error correction term indicates a gradual pace of adjustment towards long-term equilibrium. Insight from the ECM term reveals that approximately 5% of the long-term equilibrium adjustment occurs during the initial year. Meanwhile, the DW statistic, registering at 1.71, attests to the absence of autocorrelation issues within the model.

**Table 4.3: ARDL ECM Results**

<b>ECM Regression</b>			
<b>Case 5: Unrestricted Constant and Unrestricted Trend</b>			
Variables	Coefficient	T-Ratio	Prob.
Constant	-1894.627	-1.785466	0.0859
@TREND	155.6539	1.480002	0.1509
D(GDP(-1))	-0.417023	-2.230412	0.0346*
D(EXCHR)	-35.91900	-2.092174	0.0463*
<u>CointEq(-1)*</u>	-0.055662	5.031394	0.0000**
R <sup>2</sup> = 0.87	$\bar{R}^2$ = 0.85	F-St = 51.077	D.W. = 1.71

**Source: Author's compilations 2023. Note: \*sig at 5% level.**

#### 4.5 ARDL Long Run Results

Given the outcomes of the cointegration bounds test reported in Table 4.2, which indicated the presence of a sustained relationship among the variables, we subsequently proceeded to execute the ARDL long run test, the findings of which are showcased in Table 4.4 below. An evaluation of the individual importance of each variable within the model can be undertaken by assessing the significance of their respective coefficients. In light of the results, all coefficients of determination, namely official development assistance (ODAO), foreign remittance flows (FRO), financial

openness (FOPN), and exchange rate (EXCHR), do not attain statistical significance at the 5 percent level. This observation implies that these variables do not exert a substantive impact on the long-term growth of the Nigerian economy. Consequently, it can be inferred that the determinants of short-term dynamics hold pivotal influence over the overall economic expansion of Nigeria during the investigative period.

**Table 4.4: ARDL Long Run Result**

<b>Levels Equation</b>			
<b>Case 2: Restricted Constant and No Trend</b>			
<b>Variables</b>	<b>Coefficient</b>	<b>T-Ratio</b>	<b>Prob.</b>
ODAO	2.51E-06	0.605195	0.5501
FRO	-2.911921	-1.070965	0.2937
FOPN	4.54E-05	0.303120	0.7641
EXCHR	-490.1439	-0.965917	0.3427
Constant	16642.51	0.800348	0.4305

**Source: Author's Compilations 2023**

#### **4.6 Breusch-Godfrey Serial Correlation LM Test**

In order to examine the potential serial correlation of residuals in the estimation model, we employed the Breusch-Godfrey Serial Correlation LM Test, as outlined in Table 4.5. The outcomes of this analysis reveal that the null hypothesis positing serially

uncorrelated residuals cannot be rejected, as indicated by the F-Statistic p-value of 0.093796. Consequently, we conclude that the residuals do not exhibit serial correlation, aligning with the original assumption.

**Table 4.5: Breusch-Godfrey Serial Correlation LM Test**

F-statistic	0.093796	Prob. F(1,26)	0.7618
Obs*R-squared	0.125810	Prob. Chi-Square(1)	0.7228

**Source: Author's Compilation (2023)**

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary of Findings

Up to this point, the investigation has centered on scrutinizing the connection between the inflow of foreign remittances, official development assistance, and the economic advancement in Nigeria spanning the timeframe from 1986 to 2022. Employing the ARDL methodology, an evaluation was conducted to gauge the immediate and enduring effects of the explanatory factors on the dependent variable—GDP, utilized as a gauge for economic growth. The summarization of the findings is presented as follows:

- 1) Official development assistance (ODAO) manifests a feeble positive correlation with Nigeria's economic growth over the long term. Consequently, it lacks significance as a determinant of economic advancement in both the immediate and extended periods.
- 2) Foreign remittances inflows (FRO) exhibit an insubstantial adverse influence on the progression of the Nigerian economy in the long haul.
- 3) Financial openness (FOPN) does not meet the 5 percent threshold of significance, indicating its negligible impact on the protracted growth of the Nigerian economy.

- 4) The exchange rate (EXCHR) displays an inconsequential negative connection with long-term economic growth. However, during the short term, it emerges as a crucial determinant of Nigeria's economic expansion, holding significance at the 5 percent level.
- 5) Preceding values of Gross Domestic Product (GDP) exert a more pronounced impact on the short-term economic growth of Nigeria compared to current values.

## **5.2 Conclusion**

The significance of foreign capital inflows in fostering growth and development within countries, particularly in the African continent, especially those in the developing stage, remains undeniable. These foreign capital inflows encompass a range of sources, including foreign direct investment, foreign portfolio investment, official development assistance (ODA), and foreign remittance flows (FRF), among others. Nigeria has consistently been a beneficiary of these inflows for an extensive period, yet the precise contribution of these funds to the growth of the Nigerian economy remains somewhat ambiguous. As a result, this study seeks to comprehensively examine the impact of official development assistance (ODA) and foreign remittance flows (FRF) on the economy, taking into account the existing level of financial openness (FOPN) and the presence of a notably volatile and unpredictable exchange rate (EXCHR) regime in Nigeria. The research delves into a time span of 27 years, spanning from 1986

to 2022, and employs the autoregressive distributed lags (ARDL) methodology for the data analysis. The outcomes of the study generally reveal that official development assistance (ODA) exhibits a frail yet positive correlation with long-term economic growth in Nigeria. In contrast, foreign remittance inflows (FRF) showcase an insignificantly adverse effect on the nation's long-term economic growth. The degree of financial openness (FOPN) registers no substantial impact on growth, while the exchange rate (EXCHR) demonstrates a noteworthy negative influence on economic growth in the short run. Additionally, preceding values of Gross Domestic Product (GDP) exert more substantial influence on economic growth in Nigeria in the short term compared to current values.

### **5.3 Recommendations**

Based on the specific outcomes derived from this investigation, the subsequent policy recommendations can be delineated as follows:

Primarily, it is imperative to actively and persistently pursue all governmental aid through Official Development Assistance (ODA), designed to bolster the economic progress and well-being of developing nations. Whether in the form of grants or technical support, this aid should be channeled steadfastly in this direction due to its pivotal role in eradicating poverty and establishing the fundamental groundwork for sustainable long-term economic advancement.

Secondly, the discernibly marginal adverse influence of outflows from foreign remittances (FRO) on economic growth serves as a distinct indicator of its detrimental consequences. This phenomenon has the potential to hinder domestic economic expansion, generate financial limitations, undermine domestic investments, and lead to a contraction in overall tax revenue. Hence, policymakers and governmental bodies should actively pursue strategies that discourage the outflow of capital through remittances, which may include instituting caps on the repatriation of a portion of domestic earnings. This approach would serve the dual purpose of alleviating financial constraints and bolstering domestic investment, consequently fostering an increase in tax revenue. By adopting such measures, FRO could effectively be harnessed to yield the much-needed positive influence on Nigeria's economic growth.

Lastly, it is crucial for the existing economic activities to be judiciously and deliberately managed by both the government and policymakers. This strategic management is predicated on a deep understanding that prior economic activities exert a substantial influence on the current economic performance. This fact was starkly underscored by the findings of this study, which revealed that, in the short term, the lagged value of Gross Domestic Product (GDP) wields a significantly greater impact on economic growth than the contemporary GDP value itself.

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## APPENDICES

ARDL Error Correction Regression  
 Dependent Variable: D(GDP)  
 Selected Model: ARDL(2, 0, 0, 0, 1)  
 Case 5: Unrestricted Constant and Unrestricted Trend  
 Date: 08/14/23 Time: 17:18  
 Sample: 1986 2022  
 Included observations: 35

ECM Regression				
Case 5: Unrestricted Constant and Unrestricted Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1894.627	1061.139	-1.785466	0.0859
@TREND	155.6539	105.1714	1.480002	0.1509
D(GDP(-1))	-0.417023	0.186972	-2.230412	0.0346
D(EXCHR)	-35.91900	17.16826	-2.092174	0.0463
CointEq(-1)*	0.055662	0.011063	5.031394	0.0000
R-squared	0.871965	Mean dependent var	5025.068	
Adjusted R-squared	0.854893	S.D. dependent var	5420.356	
S.E. of regression	2064.769	Akaike info criterion	18.23499	
Sum squared resid	1.28E+08	Schwarz criterion	18.45718	
Log likelihood	-314.1123	Hannan-Quinn criter.	18.31169	
F-statistic	51.07762	Durbin-Watson stat	1.716952	
Prob(F-statistic)	0.000000			

\* p-value incompatible with t-Bounds distribution.

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	4.387920	10%	3.03	4.06
k	4	5%	3.47	4.57
		2.5%	3.89	5.07
		1%	4.4	5.72

t-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	5.031394	10%	-3.13	-4.04
		5%	-3.41	-4.36
		2.5%	-3.65	-4.62
		1%	-3.96	-4.96

ARDL Long Run Form and Bounds Test  
 Dependent Variable: D(GDP)  
 Selected Model: ARDL(2, 0, 0, 0, 1)  
 Case 2: Restricted Constant and No Trend  
 Date: 08/15/23 Time: 16:41  
 Sample: 1986 2022  
 Included observations: 35

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1046.122	953.0447	-1.097663	0.2820
GDP(-1)*	0.062858	0.039158	1.605243	0.1201
ODAO**	-1.57E-07	2.26E-07	-0.698186	0.4910
FRO**	0.183039	0.090669	2.018757	0.0535
FOPN**	-2.85E-06	8.19E-06	-0.348545	0.7301
EXCHR(-1)	30.80966	14.26158	2.160326	0.0398
D(GDP(-1))	-0.379230	0.210430	-1.802172	0.0827
D(EXCHR)	-26.99136	19.76383	-1.365695	0.1833

\* p-value incompatible with t-Bounds distribution.

\*\* Variable interpreted as  $Z = Z(-1) + D(Z)$ .

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ODAO	2.51E-06	4.14E-06	0.605195	0.5501

FRO	-2.911921	2.718969	-1.070965	0.2937
FOPN	4.54E-05	0.000150	0.303120	0.7641
EXCHR	-490.1439	507.4390	-0.965917	0.3427
C	16642.51	20794.10	0.800348	0.4305

---


$$EC = GDP - (0.0000*ODAO - 2.9119*FRO + 0.0000*FOPN - 490.1439*EXCHR + 16642.5140)$$


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F-Bounds Test Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	9.433250	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37
Finite Sample: n=35				
Actual Sample Size	35	10%	2.46	3.46
		5%	2.947	4.088
		1%	4.093	5.532

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.093796	Prob. F(1,26)	0.7618
Obs*R-squared	0.125810	Prob. Chi-Square(1)	0.7228

Test Equation:

Dependent Variable: RESID

Method: ARDL

Date: 08/15/23 Time: 16:44

Sample: 1988 2022

Included observations: 35

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	-0.087739	0.348121	-0.252035	0.8030
GDP(-2)	0.095706	0.378779	0.252670	0.8025
ODAO	1.03E-08	2.32E-07	0.044335	0.9650
FRO	0.002710	0.092653	0.029247	0.9769
FOPN	7.63E-07	8.69E-06	0.087765	0.9307
EXCHR	-0.801744	20.27381	-0.039546	0.9688
EXCHR(-1)	1.176134	20.46282	0.057477	0.9546
C	-54.54542	985.6765	-0.055338	0.9563
RESID(-1)	0.118153	0.385790	0.306261	0.7618
R-squared	0.003595	Mean dependent var	-7.35E-12	
Adjusted R-squared	-0.302992	S.D. dependent var	1965.221	
S.E. of regression	2243.273	Akaike info criterion	18.48629	
Sum squared resid	1.31E+08	Schwarz criterion	18.88624	
Log likelihood	-314.5101	Hannan-Quinn criter.	18.62436	
F-statistic	0.011724	Durbin-Watson stat	1.838218	
Prob(F-statistic)	1.000000			

### UNIT ROOT TEST (AT LEVEL)

Null Hypothesis: GDP has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	11.40007	1.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP)

Method: Least Squares

Date: 08/14/23 Time: 17:25

Sample (adjusted): 1987 2022

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.102665	0.009006	11.40007	0.0000
C	999.0550	538.1593	1.856430	0.0721
R-squared	0.792634	Mean dependent var	4885.769	
Adjusted R-squared	0.786535	S.D. dependent var	5407.345	
S.E. of regression	2498.313	Akaike info criterion	18.53857	
Sum squared resid	2.12E+08	Schwarz criterion	18.62655	
Log likelihood	-331.6943	Hannan-Quinn criter.	18.56928	
F-statistic	129.9617	Durbin-Watson stat	1.987035	
Prob(F-statistic)	0.000000			

ODAO

Null Hypothesis: ODAO has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.025719	0.0419
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ODAO)

Method: Least Squares

Date: 08/14/23 Time: 17:26

Sample (adjusted): 1987 2022

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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ODAO(-1)	-0.426218	0.140865	-3.025719	0.0047
C	8.50E+08	3.98E+08	2.136778	0.0399
R-squared	0.212142	Mean dependent var	1.02E+08	
Adjusted R-squared	0.188970	S.D. dependent var	2.08E+09	
S.E. of regression	1.87E+09	Akaike info criterion	45.58910	
Sum squared resid	1.19E+20	Schwarz criterion	45.67708	
Log likelihood	-818.6039	Hannan-Quinn criter.	45.61981	
F-statistic	9.154976	Durbin-Watson stat	1.794166	
Prob(F-statistic)	0.004701			

## FRO

Null Hypothesis: FRO has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.735721	0.8248
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FRO)

Method: Least Squares

Date: 08/14/23 Time: 17:26

Sample (adjusted): 1987 2022

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FRO(-1)	-0.031431	0.042721	-0.735721	0.4669
C	962.7422	624.4605	1.541718	0.1324
R-squared	0.015671	Mean dependent var	621.3889	
Adjusted R-squared	-0.013280	S.D. dependent var	2491.208	

S.E. of regression	2507.696	Akaike info criterion	18.54607
Sum squared resid	2.14E+08	Schwarz criterion	18.63404
Log likelihood	-331.8292	Hannan-Quinn criter.	18.57677
F-statistic	0.541285	Durbin-Watson stat	1.720722
Prob(F-statistic)	0.466946		

## FOPN

Null Hypothesis: FOPN has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.782984	0.3826
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FOPN)

Method: Least Squares

Date: 08/14/23 Time: 17:27

Sample (adjusted): 1987 2022

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FOPN(-1)	-0.157232	0.088185	-1.782984	0.0835
C	17751653	11338732	1.565577	0.1267
R-squared	0.085506	Mean dependent var		1015577.
Adjusted R-squared	0.058609	S.D. dependent var		39334719
S.E. of regression	38164629	Akaike info criterion		37.80667
Sum squared resid	4.95E+16	Schwarz criterion		37.89464
Log likelihood	-678.5200	Hannan-Quinn criter.		37.83737
F-statistic	3.179031	Durbin-Watson stat		1.542721
Prob(F-statistic)	0.083520			

## EXCHR

Null Hypothesis: EXCHR has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	2.150643	0.9999
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EXCHR)

Method: Least Squares

Date: 08/14/23 Time: 17:27

Sample (adjusted): 1987 2022

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCHR(-1)	0.097536	0.045352	2.150643	0.0387
C	-4.525908	7.004063	-0.646183	0.5225
R-squared	0.119747	Mean dependent var	8.021667	
Adjusted R-squared	0.093857	S.D. dependent var	24.42590	
S.E. of regression	23.25139	Akaike info criterion	9.184559	
Sum squared resid	18381.32	Schwarz criterion	9.272533	
Log likelihood	-163.3221	Hannan-Quinn criter.	9.215264	
F-statistic	4.625265	Durbin-Watson stat	1.405695	
Prob(F-statistic)	0.038701			

## UNIT ROOT TEST (AT FIRST FIRST)

Null Hypothesis: D(GDP) has a unit root

Exogenous: Constant

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

	t-Statistic	Prob.*
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Augmented Dickey-Fuller test statistic	0.317387	0.9758
Test critical values: 1% level	-3.639407	
5% level	-2.951125	
10% level	-2.614300	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP,2)

Method: Least Squares

Date: 08/14/23 Time: 17:28

Sample (adjusted): 1989 2022

Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	0.035914	0.113156	0.317387	0.7531
D(GDP(-1),2)	-0.788345	0.195792	-4.026440	0.0003
C	677.2334	703.9634	0.962029	0.3435

R-squared	0.353871	Mean dependent var	640.4888
Adjusted R-squared	0.312185	S.D. dependent var	3478.783
S.E. of regression	2885.115	Akaike info criterion	18.85661
Sum squared resid	2.58E+08	Schwarz criterion	18.99129
Log likelihood	-317.5624	Hannan-Quinn criter.	18.90254
F-statistic	8.489010	Durbin-Watson stat	1.965102
Prob(F-statistic)	0.001148		

## ODAO

Null Hypothesis: D(ODAO) has a unit root

Exogenous: Constant

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

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.333290	0.0000
Test critical values: 1% level	-3.639407	
5% level	-2.951125	
10% level	-2.614300	

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

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ODAO,2)  
 Method: Least Squares  
 Date: 08/14/23 Time: 17:29  
 Sample (adjusted): 1989 2022  
 Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ODAO(-1))	-1.517009	0.239529	-6.333290	0.0000
D(ODAO(-1),2)	0.413744	0.163508	2.530424	0.0167
C	1.53E+08	3.44E+08	0.444238	0.6600
R-squared	0.615882	Mean dependent var	-2315294.	
Adjusted R-squared	0.591100	S.D. dependent var	3.13E+09	
S.E. of regression	2.00E+09	Akaike info criterion	45.75682	
Sum squared resid	1.24E+20	Schwarz criterion	45.89150	
Log likelihood	-774.8660	Hannan-Quinn criter.	45.80275	
F-statistic	24.85217	Durbin-Watson stat	2.122217	
Prob(F-statistic)	0.000000			

FRO

Null Hypothesis: D(FRO) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.068940	0.0002
Test critical values: 1% level	-3.632900	
5% level	-2.948404	
10% level	-2.612874	

\*MacKinnon (1996) one-sided p-values.  
 Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FRO,2)  
 Method: Least Squares  
 Date: 08/14/23 Time: 17:29  
 Sample (adjusted): 1988 2022  
 Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FRO(-1))	-0.874714	0.172563	-5.068940	0.0000
C	562.0345	442.7737	1.269349	0.2132
R-squared	0.437763	Mean dependent var	23.68571	
Adjusted R-squared	0.420726	S.D. dependent var	3341.231	
S.E. of regression	2543.013	Akaike info criterion	18.57553	
Sum squared resid	2.13E+08	Schwarz criterion	18.66441	
Log likelihood	-323.0718	Hannan-Quinn criter.	18.60621	
F-statistic	25.69415	Durbin-Watson stat	1.969030	
Prob(F-statistic)	0.000015			

### FOPN

Null Hypothesis: D(FOPN) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.810347	0.0004
Test critical values: 1% level	-3.632900	
5% level	-2.948404	
10% level	-2.612874	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FOPN,2)

Method: Least Squares

Date: 08/14/23 Time: 17:30

Sample (adjusted): 1988 2022

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FOPN(-1))	-0.823444	0.171182	-4.810347	0.0000
C	560446.3	6735382.	0.083209	0.9342
R-squared	0.412178	Mean dependent var	-246876.3	
Adjusted R-squared	0.394365	S.D. dependent var	51186565	

S.E. of regression	39834688	Akaike info criterion	37.89382
Sum squared resid	5.24E+16	Schwarz criterion	37.98270
Log likelihood	-661.1418	Hannan-Quinn criter.	37.92450
F-statistic	23.13944	Durbin-Watson stat	1.930286
Prob(F-statistic)	0.000032		

## EXCHR

Null Hypothesis: D(EXCHR) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.564911	0.0119
Test critical values: 1% level	-3.632900	
5% level	-2.948404	
10% level	-2.612874	

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

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EXCHR,2)

Method: Least Squares

Date: 08/14/23 Time: 17:30

Sample (adjusted): 1988 2022

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXCHR(-1))	-0.576745	0.161784	-3.564911	0.0011
C	5.666743	3.990269	1.420141	0.1649
R-squared	0.278035	Mean dependent var	1.627714	
Adjusted R-squared	0.256157	S.D. dependent var	26.24477	
S.E. of regression	22.63515	Akaike info criterion	9.132330	
Sum squared resid	16907.55	Schwarz criterion	9.221207	
Log likelihood	-157.8158	Hannan-Quinn criter.	9.163010	
F-statistic	12.70859	Durbin-Watson stat	1.878236	
Prob(F-statistic)	0.001135			

**DATA**

YEAR	GDP	ODAO	FRO	FOPN	EXCHR
1986	187.83	67620002.75	0	23762775.5	113.2
1987	198.12	118080001.8	0	34649444.76	99.9
1988	244.68	344000000	10	32590262.53	51.89
1989	315.62	255080001.8	66	57970013.21	14.72
1990	414.86	258320007.3	56	99590613.92	12.97
1991	494.64	258820007.3	793	109280459.1	8.88
1992	590.06	288420013.4	550	15544357.19	7.72
1993	906.03	189660003.7	250	9474655.909	6.34
1994	1,257.17	210960006.7	297	-3469374.531	81.02
1995	1,768.79	188750000	586	34605368.35	81.25
1996	3,100.24	199839996.3	449	62474979.04	81.02
1997	4,086.07	203339996.3	1,301	46404792.96	81.25
1998	4,418.71	151990005.5	1,392	45992247.24	81.65
1999	4,805.16	173800003.1	1,167	134481179.7	83.81
2000	5,482.35	167820007.3	1,209	212487380.8	92.34
2001	7,062.75	299549987.8	1,063	187652412.2	101.77
2002	8,234.49	309850006.1	2,273	152433293.7	111.49
2003	11,501.45	578770019.5	14,640	117929724.5	120.65
2004	13,556.97	6401790039	16,932	192696212.9	129.22
2005	18,124.06	11431959961	18,014	213273986.2	133.00
2006	23,121.88	1958599976	19,200	267654836.9	131.10
2007	30,375.18	1293719971	18,371	240671624.7	128.14

2008	34,675.94	1639229980	19,745	247930672.7	125.07
2009	39,954.21	2052360107	20,617	182406925	117.78
2010	43,461.46	1809859985	20,543	142543327.7	147.27
2011	55,469.35	1915760010	20,797	119773160.4	148.31
2012	63,713.36	2515719971	20,999	136794417	151.83
2013	72,599.63	2478600098	20,626	113804410.2	155.45
2014	81,009.96	2431540039	19,698	83253517.21	155.25
2015	90,136.98	2498189941	22,037	59071224.71	156.48
2016	95,177.74	3358959961	24,311	82498995.25	191.80
2017	102,575.42	3304949951	23,809	107015905.5	253.09
2018	114,899.25	3277399902	17,208	103032859.6	305.29
2019	129,086.91	3375479980	19,483	46046368.54	305.58
2020	145,639.14	3583474690	20,945	61512287.64	306.42
2021	154,252.32	3583474690	21,541	58077549.16	358.31
2022	176,075.50	3730674690	22,370	60323549.16	401.98