THE NEXUS OF BANKING REFORMATION, INSTITUTIONAL QUALITY, AND ECONOMIC GROWTH: EVIDENCE FROM NIGERIA

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BY

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A final year project submitted in the partial fulfillment of the requirement for the degree of

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(3) Equal contribution has been made by each group member in completing the FYP.

(4) The word count of this research report is 13194.

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Finally, we are deeply indebted to our families and friends for their unconditional love, patience, and encouragement. Their support has been a constant source of motivation and strength during this challenging yet rewarding journey.

This project stands as a reflection of the collective efforts and contributions of all the above individuals, to whom we extend our heartfelt thanks.

DEDICATION

This Final Year Project is lovingly dedicated to our families, whose endless support, sacrifices, and encouragement have been the foundation of our strength and determination throughout our academic journey.

We also dedicate this work to our supervisor and lecturers, whose guidance, knowledge, and inspiration have greatly shaped our learning and development. Your mentorship has been invaluable in helping us reach this milestone.

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Above all, this project is dedicated to every student who continues to pursue knowledge with perseverance, resilience, and a passion for learning. May it serve as a reminder that dedication and curiosity are the true keys to success.

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey-Fuller
ARCH	Autoregressive Conditional Heteroscedasticity
ARDL	Autoregressive Distributed Lag
CBN	Central Bank of Nigeria
DIR	Deposit Interest rate
ECM	Error Correction Model
FDI	Foreign Direct Investment
GDP	GDP Growth Rate
ICRG	The International Country Risk Guide
IQ	Institutional Quality
IR	Inflation Rate
JB	Jarque-Bera
LM	Lagrange Multiplier
NBS	National Bureau of Statistics (Nigeria)
NDIC	Nigeria Deposit Insurance Corporation
OLS	Ordinary Least Squares
POP	Population

SAP	Structural Adjustment Programme
SMEs	Small and Medium-sized Enterprises
VIF	Variance Inflation Factor

PREFACE

This Final Year Project, titled "The Nexus of Banking Reformation, Institutional Quality, and Economic Growth: Evidence from Nigeria," is submitted in partial fulfillment of the requirements for the Bachelor's degree at Universiti Tunku Abdul Rahman (UTAR).

The study investigates how banking reforms and institutional quality, both individually and interactively, influence Nigeria's economic growth, with Gross Domestic Product (GDP) as the key indicator. It also considers population and inflation as control variables. Using annual data from 1998 to 2020 and applying the Autoregressive Distributed Lag (ARDL) model, the research evaluates both long-run and short-run relationships.

We are sincerely grateful to our supervisor, lecturers, and peers for their guidance, encouragement, and contributions to this project. Special appreciation is also extended to institutions such as the World Bank, Macrotrends, and ICRG for providing access to essential data.

Completing this project has been both challenging and rewarding, enriching our understanding of the role of financial reforms and institutional quality in shaping sustainable economic growth. It is our hope that this work will serve as a useful reference for policymakers, researchers, and future students interested in development economics.

ABSTRACT

This study examines the nexus between banking reformation, institutional quality, and economic growth in Nigeria, covering the period from 1998 to 2020. Banking reforms are represented by deposit interest rates, while institutional quality is measured using governance indicators from ICRG. Additional macroeconomic variables, including inflation and population, are incorporated as controls. Gross Domestic Product (GDP) growth serves as the measure of economic performance. The research employs the Autoregressive Distributed Lag (ARDL) model, with model specification guided by unit root testing, cointegration analysis, and diagnostic checks to ensure reliability and robustness. The findings highlight the existence of a long-run equilibrium relationship between banking reforms, institutional quality, and economic growth in Nigeria. The results further suggest that the effectiveness of financial reforms is conditional on the strength of institutions, indicating that reforms implemented in weak governance environments may yield limited or even adverse outcomes. This study contributes to the literature by providing empirical evidence on how financial and institutional dynamics jointly influence development in an emerging economy. The insights generated are valuable for policymakers in designing reform strategies that align financial sector adjustments with governance improvements. Recommendations include prioritizing institutional strengthening, enhancing transparency in policy implementation, and coordinating monetary reforms with broader development initiatives to foster sustainable economic growth.

Keywords: Banking reformation, Deposit interest rate, Institutional quality, Economic growth, Nigeria, Governance.

Subject area: HG1621-1638 Interest rate. Interest tables, HG8111-8123 Government policy. State supervision

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This research examines the relationship between financial reformation together with its contribution to GDP, as well as the influence of institutional quality on GDP in Nigeria. By assessing these two factors, the study will promote a better understanding of their respective influence on achieving sustainable economic development.

1.1 Background of Study

Economic growth serves as a pivotal indicator of a nation's development, reflecting its ability to enhance the living standards of its citizens. In developing countries, particularly within Sub-Saharan Africa, factors such as institutional quality, demographic trends, and the strength of the financial system play significant roles in sustaining economic growth (Acemoglu & Robinson, 2012). This study focuses on Nigeria. Figure 1.1 shows Africa’s most populous country with over 232 million people as of 2024 (Statista, 2024), and one of its largest economies, to examine the interplay between banking reforms, institutional quality, and economic growth.In 2024, Figure 1.2 shows Nigeria ranks fourth in Africa in terms of Gross Domestic Product, contributing $252.74 billion USD, trailing only South Africa, Egypt, and Algeria (Statista, 2024). This reinforces its strategic economic position on the continent.

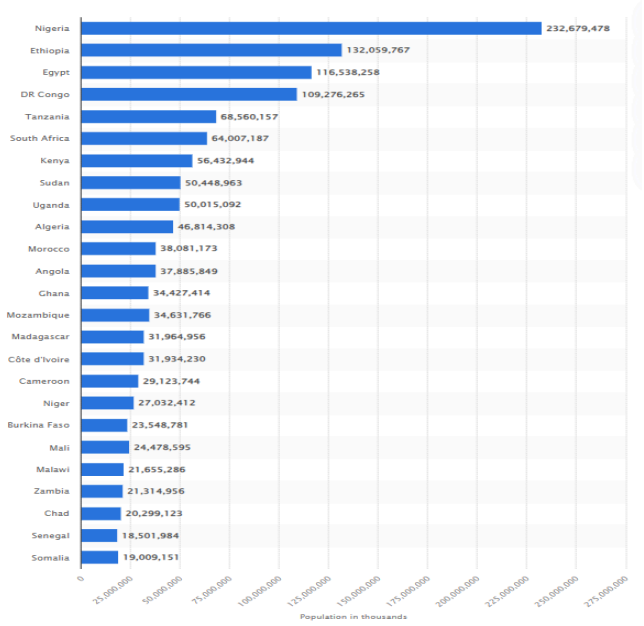

Figure 1.1: African countries with largest population as of 2024

Source: Statista

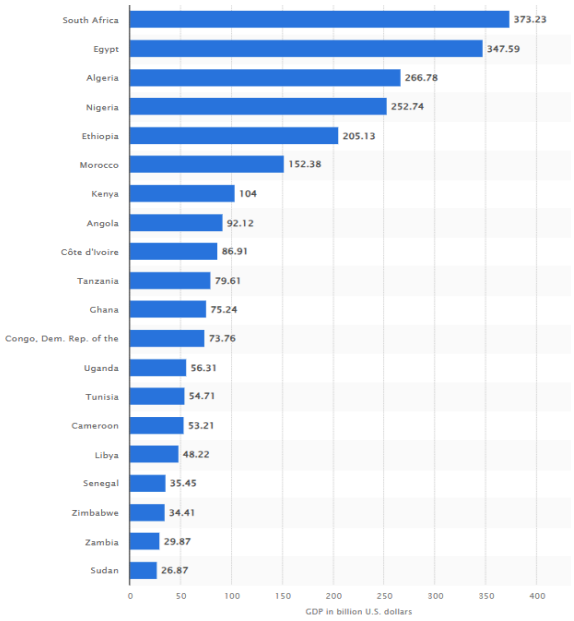

Figure 1.2: African countries with highest GDP in 2024

Source: Statista

One of the most significant reforms was the 2004 Banking Consolidation Policy. This policy raised the minimum capital requirements for banks, which triggered a series of mergers and acquisitions. As a result, the number of commercial banks declined, while the stability and resilience of the financial sector improved (Sanusi, 2010). Additionally, the Nigeria Deposit Insurance Scheme (NDIS) was established to protect depositors and promote financial stability (NDIC, 2023). The adoption of global regulatory frameworks such as Basel II and III also aimed to improve risk management, while the expansion of digital and mobile banking technologies increased financial inclusion, especially in underbanked rural communities (CBN, 2022).

Despite these efforts, the success of economic and banking reforms has been uneven, in part due to persistent issues related to institutional quality. Institutional quality refers to the effectiveness of governance, regulatory frameworks, rule of law, and anti-corruption measures. All of which are important for creating a stable environment for investment and economic activity. In Nigeria, challenges such as bureaucratic inefficiency, corruption, and weak regulatory enforcement continue to undermine reform outcomes (Kaufmann, Kraay & Mastruzzi, 2010).

The Nigerian economy shown in Figure 1.3 has experienced periods of both expansion and contraction. Following robust growth between years 2014-2024 driven primarily by high global oil prices the country entered a recession in 2016 due to a sharp decline in oil revenues. While there has been some recovery in recent years, growth has remained volatile. According to the National Bureau of Statistics (NBS), Nigeria's GDP grew by 2.74% in 2023, a decline from the 3.10% recorded in 2022. However, in 2024, the growth rate rebounded slightly to 3.4%, supported by increased oil production and renewed reform efforts.

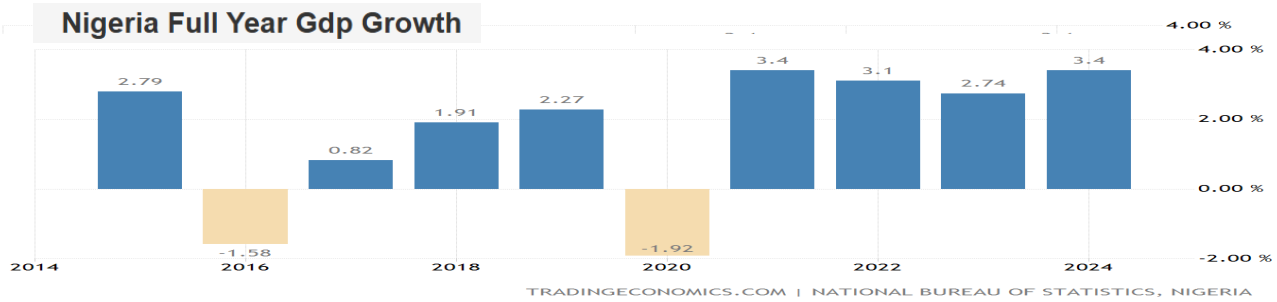

Figure 1.3

Source: National Bureau of Statistics, Nigeria

Nigeria's population dynamics present both opportunities and challenges for economic growth. As of 2025, Nigeria's estimated population stands at 233.34 million, making it the most populous country in Africa and the sixth globally. The country's population has been growing at an average rate of approximately 2.4% annually over the past few years. This rapid population growth results in a large and youthful labor force, which, if properly harnessed, can drive economic productivity and consumption. However, it also places immense strain on infrastructure, public services, and employment opportunities. Without strong institutions and a sound financial system, Nigeria risks experiencing a demographic burden rather than a demographic dividend. Figure 1.4 illustrates Nigeria's population growth from 1975 to 2025.

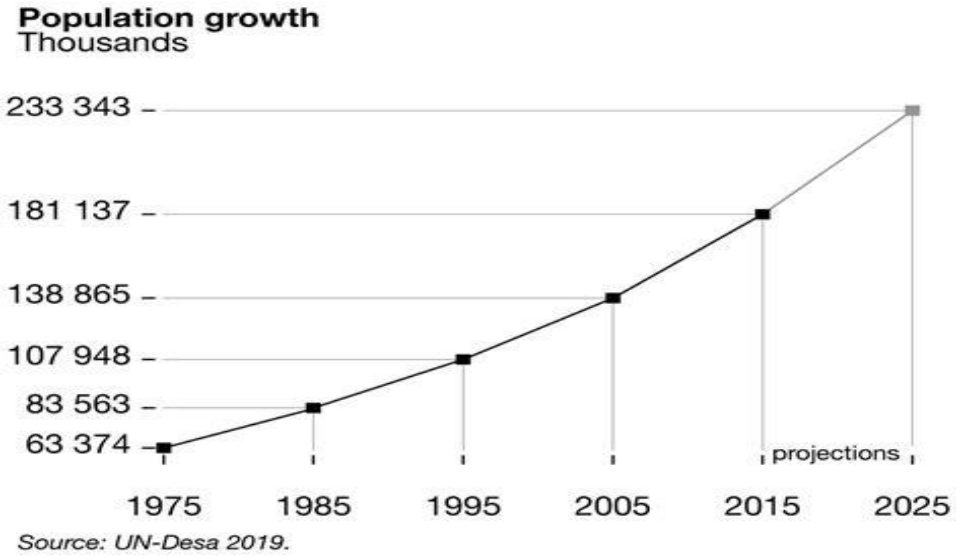

Figure 1.4

Source: United Nations - World Population Prospects

Nigeria's economy is largely driven by three main sectors that significantly contribute to its GDP: crude petroleum and natural gas, agriculture, and the services sector. Although the oil sector plays an important role as a source of government revenue and foreign exchange earnings, its share of GDP has been relatively small, contributing less than 7% across the quarters from Q4 2021 to Q3 2022. In contrast, the non-oil sector dominates the economy, accounting for over 93% of total GDP. Agriculture remains a vital sector, both for food security and employment, contributing between 22% and 30% during this period, though it continues to face challenges such as underinvestment, poor infrastructure, and low productivity. The services sector, however, has emerged as the leading driver of Nigeria's growth, consistently accounting for more than half of total GDP, with contributions ranging from 51% to 57%. Industries, including manufacturing and construction, contributed the least, ranging from 18% to 21%. Figure 1.5 provides a breakdown of Nigeria's GDP composition by sector from Q4 2021 to Q3 2022.

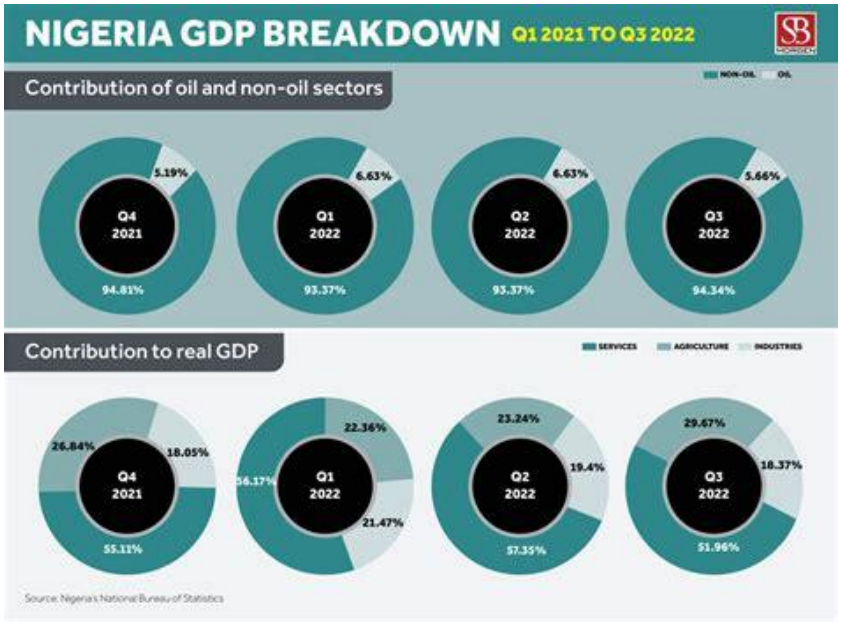

Figure 1.5

Source: National Bureau of Statistics, Nigeria

Given Nigeria's strategic position as Africa's biggest economy by population as well as one of the biggest economies in Africa by GDP, and the rapidly expanding and youthful nature of its population, there is a compelling case for exploring the relationship between banking reforms, institutional quality and economic growth. The youthfulness and growth of the population present opportunities for further economic growth, as well as challenges relating to jobs and provision of services. Moreover, recent banking reforms have taken place in Nigeria and there is a recent effort to improve institutional quality in Nigeria, and these two phenomena provide an appropriate context for investigating their effect on economic growth. This study will investigate how banking reforms and institutional quality interact under Nigeria's specific demographic and economic circumstances to impact its economic growth trajectory. As such, this study seeks to explore a narrative that is valuable by being informative, influencing future policy design and implementation in Nigeria and other developing economies similarly confronting labour and social service challenges.

1.2 Problem Statement

In Nigeria, financial reformation has been a recurring theme in the pursuit of sustainable economic development. From the Structural Adjustment Programme (SAP) of the 1980s to more recent banking consolidation exercises, recapitalization efforts, and financial inclusion strategies, successive governments and policymakers have introduced various reforms aimed at strengthening the financial system. These reforms are intended to promote savings, enhance access to credit, attract investment, and ultimately drive economic growth, often reflected in fluctuations of Gross Domestic Product (GDP).

Despite these interventions, Nigeria continues to face economic volatility, weak growth, and high levels of poverty and unemployment. This discrepancy between policy efforts and economic outcomes raises important concerns about the effectiveness of financial reforms in achieving their intended goals. A 2024 World Bank assessment estimates that 47% of Nigerians live below the $2.15 daily international poverty level, and that 14 million more people will be forced into poverty in 2024 as a result of stagnant labor wages (Tunji, 2024).

Observations over the past two decades reveal that Nigeria's GDP growth remains highly inconsistent, often affected by external factors such as oil price fluctuations, political instability, and global financial shocks. While financial reforms are designed to build economic resilience, their actual contribution to Nigeria's economic performance appears limited or short-lived. For example, improvements in the banking sector have not always made it easier for individuals or small businesses to access credit, which are essential for driving economic activity at the local level. This suggests that while financial reforms are needed, they may not be enough on their own to ensure steady GDP growth.

One possible reason for this is the country's institutional environment. In Nigeria's institutions such as its legal systems, regulatory bodies, and governance structures

play a crucial role in promoting economic outcomes. However, institutional weaknesses such as corruption, lack of transparency, weak rule of law, and political interference are still widespread (Oyetola, 2023). These issues can distort the implementation of reforms, reduce policy credibility, and discourage both local and foreign investment. As such, even well-designed banking reforms may fail to deliver the expected results if the institutional setting is not conducive. This raises a key question: Does the quality of institutions determine the success or failure of banking reforms in contributing to GDP growth?

While some studies suggest that financial development positively influences economic growth, others argue that the banking system's effectiveness depends heavily on the strength of the surrounding institutional environment. In the case of Nigeria, there is a need to investigate whether banking reforms work better or at all under conditions of weak institutional quality. Additionally, most existing research tends to examine either banking reformation or institutional quality in isolation, with limited attention given to their interaction effect on GDP. This fragmented approach creates a gap in examining how these two important factors interact to shape economic development outcomes in Nigeria.

Given this context, it becomes necessary to explore the joint and separate effects of banking reformation and institutional quality on GDP. This research is motivated by the need to bridge that gap, providing evidence-based insight into whether the problem lies in the design of reforms, in institutional limitations, or in the relationship between both. A clearer understanding of these dynamics will not only advance the existing body of research as well inform policymakers on how to align banking and institutional reforms to support more stable and inclusive economic growth in Nigeria.

1.3 Research Questions

1. How does the deposit interest rate influence the gross domestic product (GDP) growth in Nigeria?
2. How does institutional quality influence the gross domestic product (GDP) growth in Nigeria?
3. How does the population influence the gross domestic product (GDP) growth in Nigeria?
4. How does the inflation rate influence the gross domestic product (GDP) growth in Nigeria?
5. How does the interaction term between banking reform and institutional quality influence the gross domestic product (GDP) growth in Nigeria?

1.4 Research Objectives

1. To examine the relationship between the deposit interest rate and the gross domestic product (GDP) growth in Nigeria.
2. To examine the relationship between institutional quality and the gross domestic product (GDP) growth in Nigeria.
3. To examine the relationship between population and the gross domestic product (GDP) growth in Nigeria.
4. To examine the relationship between the inflation rate and the gross domestic product (GDP) growth in Nigeria.
5. To examine the relationship between the interaction term and the gross domestic product (GDP) growth in Nigeria.

1.5 Hypotheses of Study

Hypothesis 1:

H_0: There is an insignificant relationship between the deposit interest rate and GDP growth in Nigeria.

H_1: There is a significant relationship between the deposit interest rate and GDP growth in Nigeria.

Hypothesis 2:

H_0: There is an insignificant relationship between institutional quality and GDP growth in Nigeria.

H_1: There is a significant relationship between institutional quality and GDP growth in Nigeria.

Hypothesis 3:

H_0: There is an insignificant relationship between population and GDP growth in Nigeria.

H_1: There is a significant relationship between population and GDP growth in Nigeria.

Hypothesis 4:

H_0: There is an insignificant relationship between the inflation rate and GDP growth in Nigeria.

H_1: There is a significant relationship between the inflation rate and GDP growth in Nigeria.

Hypothesis 5:

H_0: There is an insignificant relationship between the interaction term (deposit interest rate and institutional quality) and GDP growth in Nigeria.

H_1: There is a significant relationship between the interaction term (deposit interest rate and institutional quality) and GDP growth in Nigeria.

1.6 Significance of study

This study is significant as it aims to investigate the individual and combined effects of banking reformation and institutional quality on Nigeria's economic growth, indicated by Gross Domestic Product (GDP). Throughout the years, Nigeria has implemented a range of banking reforms designed to improve efficiency, stability and, ultimately, inclusiveness within its banking sector. While institutional quality, as defined using the control of corruption, rule of law, regulatory quality and others, is an important determinant of economic performance, this research trails banking reformation and institutional quality, separately and as an interaction term, to find out if either of the two impacts GDP independently or whether their interaction produced a greater or lesser effect on economic performance. This distinction is important as banking reform processes implemented in a weak institutional context, may not have the same potential outcome as the process delivered in a strong institutional context.

From a policy perspective, this research provides important implications for key Nigerian institutions, especially the Central Bank of Nigeria and other governance and disaster risk reduction entities in Nigeria. Understanding whether the effectiveness of banking reforms and the quality of institutions can help design better-targeted and impactful policies in the context of sustainable economic development. Collectively, as an academic contribution, the study fills an existing void in research on banking reforms and institutional quality, as this concept has been examined in isolation in the current academic literature. Moreover, we examined both effects of individual variables as well as the interaction effects of both banking

reforms and institutional quality on GDP. This approach will also allow for benchmarking other developing nations that share similar experiences to developing nations like Nigeria.

Lastly, the study is a helpful reference for future researchers, students and development practitioners interested in the complex interactions of banking reform, institutional set-up and macroeconomic outcomes in emerging economies such as Nigeria.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter presents a comprehensive review of relevant literature that forms the foundation of this study. The chapter is distributed into four key sections. Firstly, the empirical review discusses investigating the connection between the independent and dependent variables. Secondly, the conceptual structure illustrates the proposed relationship among the variables used in this study. Lastly, the research gap section identifies the areas that have not been sufficiently explored in the existing literature and highlights how this study aims to fill those gaps.

2.1 Theoretical Review

This study is underpinned by two key theoretical frameworks which are the Endogenous Growth Theory and the Institutional Theory. These theories offer important perspectives for understanding how banking reform in particular, through mechanisms such as deposit interest rate adjustments and improvements in institutional quality, can influence long-term economic growth in a developing country like Nigeria. Additionally, control variables such as population and inflation rate reflect macroeconomic dynamics that may affect the strength and direction of these relationships.

The theory of Endogenous Growth, which was introduced by Romer (1986) and Lucas (1988), emphasizes the internal dimensions that sometimes govern economic growth. The possibility of continued long-run growth does not completely depend on exogenous technological changes. To contrast with the neoclassical Solow model that applied diminishing returns to capital through the combination of labor, it also viewed

technological progress as exogenous (in the absence of any internal incentives). Relating to endogenous growth, having direct linkages to the economic policy may turn out to be the largest force that modifies sustainable growth in the long run. In this space, financial policies such as deposit interest rates suggest significant levers. A regulated and well-structured interest rate regime that is competitive for deposits will stimulate savers by encouraging individuals and firms to deposit excess funds with banks. This in turn expands the pool of loanable funds, which allows the bank to provide more credit for productive investments in sectors such as infrastructure, entrepreneurship, and industry, all of which have implications for growth in GDP (Romer, 1986; Lucas, 1988).

Empirical support for this theoretical perspective is evidenced in Akpan's (2004) study of the Nigerian economy from 1970 to 2002. He found that interest rate liberalisation, an essential characteristic of financial sector reform, was important in stimulating the mobilization of savings and capital formation. When interest rates are determined by market forces and reflect real economic circumstances, they tend to promote efficient resource allocation as well as long-term productive investment. However, the central message from this study was that the series of economic shocks would erode savings and investment in households and the corporate sector. Regulated interest rates remove the source of volatility and help increase confidence of savers and investors, increase the intermediary capability of financial institutions, and enhance economic activity (Adekunle, Onanuga, & Sulaimon, 2024). Therefore, for deposit rates to promote sustainable economic growth as discussed in the endogenous growth theory, interest rates should become liberalized and monochromatic.

As a complement, there is the Institutional Theory by North (1990), which considers the role of institutions like laws and regulations, informal rules and norms, conventions, or unspoken directives in explaining economic performance. Indeed, this theory contends that institutions contribute to reducing uncertainty in economic transactions, provide a mechanism for contract enforcement, and encourage concrete

trust and transparency in the financial system. Therefore, in Nigeria, institutional quality affects the implementation and impacts of banking reform. Strong institutions would ensure that banking reforms are more than just pledges, if not empty promises, but are put into effective enforcement and embedded within institutional governance and regulatory objectives. In contrast, weak institutions are often characterised by corruption, political interference, and inefficiencies, ultimately undermining reform development and inhibiting the economic progress being sought.

The empirically validated importance of institutional quality in economic development has been established since Abubakar (2020) studied the dynamics between institutional quality and economic growth in Nigeria utilizing data between the years of 1979 to 2018. The study found that governance indicators including control of corruption, rule of law and regulatory quality are positively correlated and significant to GDP growth. In addition to this, Igbakula, Ushahemba using an ARDL model, shows that improvements in institutional quality enhance investors confidence; reduce transactional and investor risks and credible credit allocation, while stimulating long- term growth. The theoretical assertion that without strong and accountable institutions that banking solutions will likely yield poor reform outcomes is inherent is given credibility in these findings. For this reason, institutional quality is seen in this study as not simply a variable of interest, but a critical mechanism through which reform outcomes are realized.

Although deposit interest rate and institutional quality are the dominant variables in this study's theoretical model, considering control variables such as population and inflation rate will also serve to explore facets of the macroeconomic context. Population is an important demographic variable because it relates directly to the amount of available labor and experience and affects consumption and production patterns. Theoretically, population growth may contribute in development by supporting economic growth and providing a potential domestic market and workforce; however, continued population growth can only either accelerate or sustain economic development if it is also matched by infrastructure level, job

creation, and human capital; Otherwise, a growing population can become a burden of draining public services and lowering per capita income (Solow, 1956).

On the other hand, inflation is an important macroeconomic indicator, and can directly affect the real value of interest rates and savings. According to money theory, high inflation can decrease the real return on savings and cause a channel through which monetary policy operates to collapse, thus decreasing the potency of interest rate modulations. If inflation rates are above deposit rates, depositors may move savings into informal or speculative assets, thereby loosening the ability of the banking sector to mobilize and direct savings effectively. Osisanwo et al. (2017) discovered a strong negative correlation between investment and inflation in Nigeria, that high inflation risk accounted for negative implications for savings and investment. Including inflation as a control variable in the theoretical model allows for more precise estimates of the net effect of banking reform on GDP growth.

In summary, the study constructs a conceptual framework utilizing Endogenous Growth Theory and Institutional Theory. The expectation is that reforms to deposit interest rates to help increase economic growth via savings and improved access to credit. Institutional quality is hypothesized to moderate this relationship and enhance the likelihood that the reforms will be effectively implemented and accepted as credible by market actors. Population and inflation are also contextual factors that are anticipated to shape these operative relationships. The combination of these two theories helps us build a conceptual framework that shows how financial policy reforms behave within the confines of institutional and macroeconomic environments to produce long-run economic growth outcomes in Nigeria.

2.2 Empirical Review

This section examines the link between the independent variables like Deposit Interest Rate, Institutional Quality, Population, and Inflation Rate and the dependent

variable GDP growth rate, as identified in existing empirical studies. The objective is to examine how these variables interact and drive overall economic growth.

2.2.1 Deposit Interest Rate and GDP Growth Rate

The deposit interest rate is very important in determining the flow of funds in an economy, with a direct impact on savings, investment, and consumption levels. In principle, classical economics suggests that higher deposit rates will result in higher savings, as individuals or institutions will prefer to defer current consumption to receive interest income. These savings can then be provided to productive investment through the banking sector; hence, capital formation and economic growth occurs (Fry, 1995). Dabwor (2018) stated that a rise in deposit interest rates enables savings mobilization which increases the availability of investment capital and therefore, positively impacts economic growth in Nigeria. Likewise, Orji et al. (2015) emphasized that interest rate liberalization, especially deposit interest rate liberalization, if properly managed, will often support financial deepening and economic expansion.

However, empirical evidence shows a more complicated picture emerging than this. In developed economies with low inflation, stable and regulated financial systems; a higher deposit interest rate has increased savings and investment. However, in still developing economies such as Nigeria, and others where the financial system is underdeveloped and inflation is high, this is less evident (Epaphra, 2014; Adekunle et al., 2024).

In Ojo (2021), a specific case study of Nigeria, the researcher indicated that while an increase in deposit rates is associated with increases in savings deposits, the effect on GDP growth is far less certain due to economies that suffer from instability and lack of financial inclusion. Additionally, if deposit or savings rates on deposits are high, the cost of borrowing will be higher, disincentivizing private investments and capital

expansions, most notably with SMEs, the backbone of jobs and GDP creation. Furthermore, informal finance and a distrust of depository institutions diminish the intended effect of rate change (Adekunle et al., 2024).

For the Nigerian context in particular, inflation reduces the effective value of interest income, further disincentivizing long-term saving as inflation diminishes the real return on deposits. For example, increased returns on deposits often lead to capital flight or investment in unproductive assets in real estate or foreign currencies. So, while interest rates remain an available option for monetary policy, they appear to have limited effects on GDP growth without extending inflation management and broader financial sector reforms (Akwe et al., 2020).

2.2.2 Institutional Quality and GDP Growth Rate

Institutional quality refers to the strength and efficiency of a country's legal, regulatory, and administrative systems. Based on the North (1990) findings, institutions are the "rules of the game" in a society, and their quality significantly determines economic outcomes. High institutional quality promotes transparency, reduces transaction costs, protects property rights, and ensures policy adequacy and predictability factors that are crucial for fostering investment and sustainable growth. Rodrik, Subramanian and Trebbi (2004) identified institutions as the most significant long-run determinant of economic performance, even more than geographic or trade variables. In Nigeria, Anthony Ekpang et al., 2025 demonstrated that stronger institutional systems positively influence economic performance by improving investor confidence and governance quality.

Empirical literature consistently shows a strong positive relationship between institutional quality and GDP growth. For instance, Kaufmann et al. (2010) emphasized that countries with robust governance structures, low levels of corruption, and effective regulatory systems attract higher foreign direct investment (FDI), facilitate entrepreneurship, and enhance macroeconomic management. Similarly, Acemoglu and Robinson (2012) argue that inclusive institutions that distribute power widely and uphold individual rights lead to innovation and economic prosperity.

However, Nigeria faces persistent challenges in institutional governance. Despite banking sector reforms aimed at improving efficiency and stability, institutional weaknesses such as widespread corruption, lack of accountability, and weak enforcement of regulations continue to impede economic progress (Sanusi, 2010). For example, inconsistent policy implementation and political interference often undermine investor confidence, deterring both domestic and international investment. These governance challenges also affect the effectiveness of central banking operations, fiscal policy enforcement, and overall financial regulation.

Furthermore, poor institutional quality exacerbates economic inequality and reduces social mobility, thereby limiting the developmental impact of economic growth. Adegbite and Naudé (2011) have found that weak institutions contribute to a volatile macroeconomic environment, resulting in reduced long-term GDP growth. High-quality governance drive more investment flows, have less capital flight, and offer more certainty about policies and outcomes (Kaufmann et al., 2010).Institutions are not simply background conditions, but rather core determinants of how policies operate and their success or failure (Rodrik et al., 2004).

2.2.3 Population and GDP Growth Rate

In economics, the impact of population on economic growth has been widely discussed over time. While early theories such as Malthusianism viewed population growth as a threat to economic development due to the risk of overpopulation and resource depletion, more recent frameworks suggest that population can be a powerful driver of economic growth, particularly when accompanied by sound policy and investment in human capital. Recent evidence shows that ageing or even declining populations do not necessarily harm socio-economic performance, as countries with low or negative population growth often perform well when supported by strong investments in human capital and equality (Bradshaw & McDermott, 2025).

Barro (1996) argues that if population growth occurs alongside knowledge investments in education and health, then GDP could increase, which is especially the case in developing economies with a growing young population, like Nigeria. Adewole (2012) argues that high rates of population growth are correlated with more economic development in Nigeria when there are adequate human capital development policies to support population growth.

A large and growing population can expand the labor force, increase consumption demand, and provide a domestic market for goods and services, thereby stimulating

production and investment. This concept, known as the "demographic dividend," implies that if a country can equip its population, especially the youth, with education, skills, and employment opportunities, it can experience sustained economic growth (Bloom and Canning, 2008).

However, in the absence of sufficient job creation, education, and infrastructure, rapid population growth can overwhelm government capacity, leading to unemployment, poverty, and social instability. In Nigeria, with an estimated population exceeding 220 million and a median age below 18, the stakes are particularly high. The country's demographic profile offers immense potential but also presents significant challenges. The United Nations (2024) warns that Nigeria's population growth, if not accompanied by equitable economic opportunities, may deepen socioeconomic disparities and limit GDP growth.

Additionally, high dependency ratios where a large portion of the population is either too young or too old to work strain public resources and reduce the productivity gains from a growing population. The informal sector continues to absorb much of Nigeria's labor force, often under poor working conditions and with low productivity, further limiting the potential contribution of population growth to GDP.

2.2.4 Inflation Rate and GDP Growth Rate

Inflation is one of the most closely monitored macroeconomic indicators due to its significant implications for consumption, investment, and overall economic stability. The relationship between inflation and GDP growth is complex and often nonlinear. Moderate inflation can drive growth by supporting spending and investment before the prices increase further. However, when inflation becomes excessive or unpredictable, it introduces macroeconomic instability, erodes purchasing power, and discourages long-term planning by households and businesses.

Barro (1995) demonstrated that high inflation negatively affects economic growth, particularly in developing economies where financial markets are shallow and institutions are weak. Inflation reduces real income, disproportionately affecting low and middle-income households, and creates uncertainty that deters both domestic and foreign investment. It also leads to higher loan interest rates, which boost the cost of borrowing and slow down economic activity.

Empirical studies such as Fischer (1993) report a strong negative correlation between inflation and economic growth, especially in developing economies like Nigeria, where inflation volatility causes problems for macroeconomic stability. When inflation is unsolved, it weakens investor confidence and raises a cost of living which leads to less productivity and worse economic performance.

Nigeria has experienced prolonged periods of inflation volatility, driven by factors such as exchange rate depreciation, fuel subsidy adjustments, and agricultural supply shocks. According to the Central Bank of Nigeria (CBN, 2022), inflation consistently exceeded the government's target range, undermining monetary policy effectiveness and creating a hostile environment for economic expansion. The frequent adjustment of interest rates to counter inflation has often yielded mixed results due to structural inefficiencies in the financial system.

Moreover, inflation disproportionately impacts small businesses and fixed-income earners, reducing consumer confidence and limiting aggregate demand. The result is a vicious cycle of low investment, reduced output, and stagnant GDP growth. Addressing inflation requires a coordinated macroeconomic strategy, including fiscal discipline, monetary tightening, and structural reforms in agriculture and energy (Akwe et al., 2020; Ihum et al., 2018).

2.3 Conceptual Framework

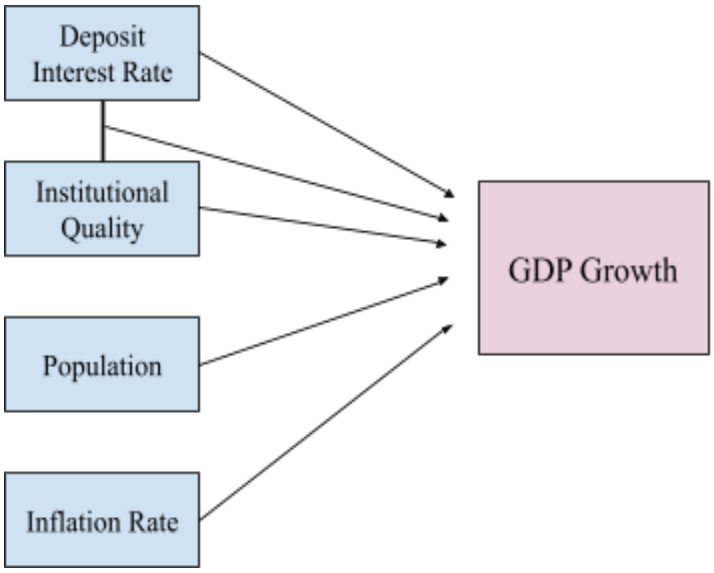

Figure 2.1: Proposed Conceptual Framework.

Figure 2.1 shows the conceptual framework that guides the study. The main objective is to explore how banking-related and institutional factors affect Nigeria's economic growth (GDP). The framework includes two key independent variables which are Deposit Interest Rate and Institutional Quality, and two control variables included Population and Inflation Rate. An interaction term between Deposit Interest Rate and Institutional Quality is also included to examine whether institutions can strengthen the impact of interest rates on GDP.

Deposit Interest Rate (DIR) is a major monetary policy tool we used to influence economic behavior. A higher deposit rate can encourage people and businesses to save more money in banks. These savings, in turn, can be used by banks to offer more loans, which may support investment and business growth, eventually leading to higher GDP. Olasehinde-Williams (2024) examined interest rate volatility in Nigeria and mentioned that stable and moderately increasing deposit rates can stimulate economic growth. However, interest rate effects are not always straightforward. In

Nigeria, high deposit rates may discourage borrowing due to expensive loan costs, which could slow economic activity. Also, if the banking system is not effective in lending to productive sectors, increased savings may not translate into real economic growth. Therefore, DIR is included in the model to study its direct relationship with Nigeria's economic output.

Institutional Quality (IQ) indicates the effectiveness of a country's control of corruption, law and order, government stability, democratic accountability, investment portfolio, religious tensions, ethnic tensions, and bureaucracy quality. Good institutions reduce corruption, enforce laws fairly, and support transparent decision-making. Ejedegba (2025) investigated the role of corruption (a key IQ indicator) in Nigeria and found that corruption significantly undermines economic performance, highlighting the importance of institutional strength. In Nigeria, weak institutions have often been linked with poor public service delivery, corruption, and economic mismanagement. Stronger institutions create a safer and more predictable environment for investment, business activities, and economic development. This study includes IQ as a main independent variable, recognizing that well-functioning institutions can unlock economic potential by increasing investor confidence and ensuring that economic policies are successfully implemented.

Furthermore, population and inflation rate are included as control variables. Population (POP) is treated as a control variable because while it is not the primary focus of this study, it can still influence GDP outcomes. A larger population can provide more labor and more consumers, which boosts both production and demand in the economy. However, if population growth is not matched with enough jobs, education, and infrastructure, it can cause more harm than good. For example, overcrowded cities, youth unemployment, and strain on social services are common challenges in fast-growing populations like Nigeria's. As such, population is included in the model to control for its potential influence on GDP and to avoid overestimating the effects of the main independent variables.

Inflation rate (IR) is also included as a control variable to examine its relationship with economic growth. It reflects how quickly prices are rising in the economy. Moderate inflation is generally acceptable, but when inflation becomes too high or unpredictable, it can hurt the economy by reducing purchasing power and making it harder for businesses to plan. Nigeria has often struggled with inflation due to food price shocks, fuel shortages, and exchange rate instability. These factors can affect household spending, investment, and even government policy responses. Including inflation as a control variable allows the study to account for this broader macroeconomic condition and its influence on GDP.

The interaction term (DIR × lnIQ) is used to find out whether institutional quality changes the way interest rates affect GDP. This is important because interest rate policies may not work the same way in all environments. In countries with strong institutions, changes in interest rates are more likely to influence savings, investment, and spending behavior effectively. In contrast, in weak institutional settings, these same policies may be ignored, misapplied, or produce little impact. Alalade et al. (2023) examine how deposit interest rate, money supply, and institutional quality jointly affect investment growth in Nigeria. They discover that institutional quality significantly moderates the impact of interest rates on investment, which in turn can impact GDP. By studying this interaction, the research can reveal whether strong institutions help make interest rate policy more effective in promoting economic growth. Therefore, this interaction term provides a deeper insight into how macroeconomic and institutional variable combine to shape economic outcomes. Overall, The proposed framework provides a structured approach to examine how the main and control variables interact to influence Nigeria's economic growth.

2.4 Research Gap

Nigeria has implemented several banking reforms over the past two decades to improve financial stability and stimulate economic growth. However, despite these efforts, the country still struggles with weak GDP performance, raising questions about the actual effectiveness of such reforms (Sanusi, 2012). Existing studies have assessed the relationship between banking sector reform and economic growth, but many focus only on short-term impacts or do not consider broader macroeconomic variables (Amaegberi & Krokeyi, 2023). At the same time, institutional quality has also been recognized as a factor influencing economic performance (Joshua et al., 2023; Ogbuabor et al., 2020). However, few studies in the Nigerian context have explored whether the success of economic performance depends on these interaction variables. Moreover, the interaction between banking reforms and institutional quality in affecting GDP growth remains under-researched. This presents a significant gap, especially in countries like Nigeria where institutional weaknesses may hinder the effectiveness of financial policies. Many existing studies on the relationship between banking reformation and economic growth in Nigeria rely on panel data analysis, often using datasets that compare multiple countries or financial institutions over time. While panel data provides useful insights, it has notable limitations in assessing long-run trends and policy impacts within a single economy. Different countries have varying banking regulations, economic conditions, and financial systems, which makes it harder to single out the true effect of banking reformation on Nigeria's economic growth. One limitation of panel data is that it tends to generalize results across countries, despite differences in financial systems, banking regulations, and macroeconomic conditions. Uddin et al. (2019) applied a panel data approach to examine banking system stability and its impact on economic sustainability across 37 developing nations, including Nigeria. Therefore, this study aims to fill the research gap by utilising time series analysis over a 23 year period to examine the long-run impact of banking reforms on economic growth in Nigeria.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter outlines the methodology employed to investigate the relationship between banking reformation, institutional quality, and GDP growth in Nigeria. It provides a comprehensive explanation of the research design, data sources, variables used, and the analytical techniques adopted to achieve the study's objectives. Given the quantitative nature of this research, econometric methods are applied to assess both the individual and interaction effects of banking reformation and institutional quality on economic performance. The methodology is structured to safeguard the consistency and validity of the findings, contributing meaningfully to the existing body of knowledge on economic development and policy formulation in Nigeria.

3.1 Data Description

Table 3.1: Summary of data

Variable	Abbreviation	Unit Measurement	Expected Sign	Sources
Dependent Variable				
GDP Growth Rate	GDP	Percentage (%)	Positive	Macrotrends
Independent Variables				
Deposit Interest rate	DIR	Percentage (%)	Positive	World Bank

Institutional Quality	IQ	Institutional Quality Index	Positive	The International Country Risk Guide (ICRG)
Population	POP	Population in Nigeria (Thousand)	Positive	World Bank
Inflation Rate	IR	Percentage (%)	Negative	Macrotrends

The table above has shown the summary of variables including abbreviation, unit measurement, sources and expected sign. Time series analysis is employed to analyze the association between the dependent and independent variables. We collected secondary data from different sources on a yearly basis from 1998 to 2020.

3.1.1 Dependent Variables

GDP Growth Rate

The Gross Domestic Product (GDP) growth rate serves as the dependent variable and is defined as the yearly percentage change in the total value of all final goods and services produced in Nigeria. It represents a key indicator of the country's economic performance over time. Data of the GDP Growth Rate is from Macrotrends and is measured in percentage (%). The GDP growth rate may show either a positive or negative relationship with the independent variables, depending on whether changes in those variables enhance or hinder economic performance.

3.1.2 Independent Variables

Deposit Interest Rate (DIR)

This is one of the main independent variable we focus on in our study. We use the variable of deposit interest rate to represent banking reformation in this study. It is measured in percentage terms, representing the rate at which financial institutions pay interest on savings and fixed deposits. This variable's data is sourced from the World Bank, with the expectation that the deposit interest rate (DIR) will be positively associated with GDP growth. Higher interest rates on deposits can encourage individuals and businesses to save deposits, resulting in greater Funds available for investment. Capital accumulation increases the wealth of individuals and businesses, thereby stimulating productive activity and driving GDP growth.

$\therefore$ Let β_1 represent the coefficient of DIR. Given the expected positive effect, it can be denoted as $\beta_1 > 0$.

Institutional Quality (IQ)

This is another main independent variable which is measured using the Institutional Quality Index retrieved from the International Country Risk Guide (ICRG). The index assesses governance strength, political stability, rule of law, and regulatory quality on a numerical scale. It includes 6 aspects such as control of corruption, law and order, government stability, democratic accountability, investment profile, religious tensions, ethnic tensions, bureaucracy quality. A positive sign is anticipated, as stronger institutions will develop investor confidence and economic efficiency. Strong institutions defined with good rule of law, low levels of corruption, government effectiveness, and good regulatory quality, provide stable economic conditions that attract investment, enhance productivity, and promote innovation.

$\therefore$ Let β_2 represent the coefficient of IQ. Given the expected positive effect, it can be denoted as $\beta_2 > 0$.

Population (POP)

For the population variable, the data is measured as the total population of Nigeria, expressed in thousands of people. This reflects demographic size and potential labor force, with data taken from the World Bank. It is expected to exhibit a positive relationship with GDP growth.. An increasing population can be beneficial because it increases the labor force and increases domestic market size. Furthermore, population growth can produce a demographic dividend that can be realized and translate into increases in production and consumption that lead to economic growth.

$\therefore$ Let β_3 represent the coefficient of POP. Given the expected positive effect, it can be denoted as $\beta_3 > 0$.

Inflation Rate (IR)

This variable is defined as the yearly percentage change in the Consumer Price Index (CPI), indicating changes in the general price level of products and services. The data set is obtained from Macrotrends. The inflation rate is assumed to be negatively associated with GDP growth. High inflation typically diminishes the purchasing ability of consumers, weakens the value of savings, and creates uncertainty in the economy, which can negatively impact investment and long-run growth.

$\therefore$ Let β_4 represent the coefficient of IR. Given the expected negative effect, it can be denoted as $\beta_4 < 0$.

3.2 Theoretical Framework

In this study, we will use the theoretical framework established by Demetriades and Law (2006), who developed an empirical growth model to examine how financial development and institutional quality jointly influence economic performance. The foundation of their model employ an augmented Cobb-Douglas production function, which includes capital, labor, and a technology term that evolves over time:

$$Y_{it} = K_{it}^{\alpha} (A_{it} L_{it})^{1-\alpha}$$

In this expression, Y_{it} denotes the real output of country i at time t, K_{it} is physical capital, L_{it} represents the labor force, and A_{it} captures technological progress and efficiency. The model assumes diminishing returns to capital, with $0 < \alpha < 1$, and constant returns to scale.

Unlike traditional neoclassical models, which treat technological change as exogenous, this framework endogenizes productivity growth by assuming that financial development and institutional quality can influence the efficiency term A_{it}. Specifically, A_{it} evolves according to:

$$A_{it} = A_{i0} \cdot e^{g_i t + P_{it} \cdot \gamma_i}$$

Here, g_i is the exogenous rate of technological progress, while P_{it} is a vector that includes financial development and institutional quality. The parameter vector γ_i captures how these structural features affect productivity. When this is substituted into the original production function and converted into per-worker terms, the model becomes:

$$ln\, y_{it} = ln\, A_0 + (1 - \alpha) g_i t + (1 - \alpha)\gamma_i P_{it} + \alpha\, ln\, k_{it} + \varepsilon_{it}$$

In this version, $y_{it} = Y_{it}/L_{it}$ is output per worker, $k_{it} = K_{it}/L_{it}$ is capital per worker, and ε_{it} is the error term. This log-linear formulation allows for empirical estimation using standard panel techniques.

To explore whether financial development and institutional quality interact in shaping economic outcomes, the authors further extend the model by including a multiplicative interaction term. This leads to the following specification:

$$ln\, y_{it} = \beta_0 + \beta_1 FD_{it} + \beta_2 INS_{it} + \beta_3 (FD_{it} \cdot INS_{it}) + \beta_4 ln\, k_{it} + u_{it}$$

In this equation, FD_{it} represents financial development, INS_{it} refers to institutional quality, and their interaction term $FD_{it} \cdot INS_{it}$ captures the joint effect. This formulation enables a deeper insight into how the effect of finance on growth may vary depending on the strength of institutions.

Furthermore, to capture both long-run relationships and short-run dynamics, Demetriades and Law adopt a dynamic panel data approach based on the Autoregressive Distributed Lag (ARDL) model and error correction mechanisms. Their full dynamic specification takes the form:

$$\Delta y_{it} = \phi_i (y_{it-1} - \theta_i x_{it-1}) + \sum_{j=1}^{p-1} \lambda_{ij} \Delta y_{it-j} + \sum_{j=0}^{q-1} \delta_{ij} \Delta x_{it-j} + \mu_i + \varepsilon_{it}$$

This equation decomposes the evolution of output per capita into short-run changes (Δy_{it}) and deviations from a long-run equilibrium, with ϕ_i representing the speed of adjustment back to that equilibrium. The long-run relationship is specified as:

$$y_{it} = \theta_i x_{it} + z_{it}$$

Here, x_{it} includes financial development, institutional quality, their interaction, and capital per worker. The model assumes that while short-run coefficients and adjustment speeds can vary across countries, the long-run relationships may be homogeneous or heterogeneous.

This framework incorporates institutional quality, financial development, and their interaction into a system of production-based growth model, creating a strong framework for analyzing how structural reforms and governance affect economic outcomes. The model is especially relevant for developing countries such as Nigeria, where both financial systems and institutional frameworks are evolving.

3.3 Econometric Model

The empirical model functional form is expressed as:

GDP Growth = f [Deposit Interest Rate, Institutional Quality, Population, Inflation Rate, Interaction term (Deposit Interest Rate_Institutional Quality)]

$$GDP_t = f(DIR_t,\ ln(IQ_t),\ ln(POP_t),\ IR_t,\ DIR_t \cdot ln(IQ_t))$$

To make the analysis more accurate and easier to understand, we use a semi log-linear model. The equation becomes:

$$GDP_t = \beta_0 + \beta_1 DIR_t + \beta_2 ln(IQ_t) + \beta_3 ln(POP_t) + \beta_4 IR_t + \beta_5 (DIR_t \cdot ln(IQ_t)) + \varepsilon_t$$

The use of the log helps to stabilize the data and makes it more usable for our data analysis. It also gives adequate technique to better interpret the results.

3.4 Estimation Techniques

This study applies the Autoregressive Distributed Lag (ARDL) approach to assess the long-term relationship between GDP growth and its independent variables (deposit interest rate, institutional quality, population, and inflation rate) in the context of Nigeria. Before applying the ARDL estimation, we will conduct unit root tests to ensure all of the variables are stationary and appropriate for estimation.

3.4.1 Unit Root Tests

It is important to examine the stationarity of the time series data before applying the ARDL model, as this helps prevent misleading regression outcomes. This study acknowledges that unit root testing is to follow in order to identify the order of integration of each variable. It is also important to make sure that none of the variables are integrated to the second difference, I(2), because the ARDL approach is only relevant when the variables are either level stationary I(0) or become stationary after first differencing I(1) (Pesaran et al., 2001). Once the stationarity properties of the individual variables are confirmed, it is reasonable to use the ARDL method to examine the long-run and short-run relationship. Unit root tests include Augmented Dickey-Fuller (ADF) Test and Phillips-Perron (PP) Test.

3.4.2 Augmented Dickey-Fuller (ADF) Test

The Augmented Dickey-Fuller (ADF) test is one of the most popular unit root tests. It used to check for the presence of a unit root in each variable by accounting for lagged differences of the dependent variable in order to reduce autocorrelation in the error terms.

ADF Model with Intercept and Trend (also referred to constant and trend):

$$\Delta Y_t = \alpha + \beta t + \gamma Y_{t-1} + \sum_{i=1}^{p} \delta_i \Delta Y_{t-i} + \varepsilon_t$$

ADF Model with Intercept Only (Without Trend):

$$\Delta Y_t = \alpha + \gamma Y_{t-1} + \sum_{i=1}^{p} \delta_i \Delta Y_{t-i} + \varepsilon_t$$

The hypothesis is as follows:

H_0 : The series has a unit root (There is non-stationary)

H_1 : The series has no unit root (There is stationary)

3.4.3 Phillips-Perron (PP) Test

The Phillips–Perron (PP) test is an alternative unit root test employed to determine the stationarity of a time series. It applies non-parametric techniques to address serial correlation and heteroscedasticity in the error term without adding the lagged difference terms.

The hypothesis is as follows:

H_0 : The series contains a unit root, indicating non-stationarity.

H_1 : The series does not contain a unit root, indicating stationarity.

For the unit root test, the decision rule is as follows:

Reject H_0 when the p-value is less than the significance level, otherwise, retain H_0.

3.4.4 Autoregressive Distributed Lag (ARDL) Approach

In this study, the Autoregressive Distributed Lag (ARDL) approach introduced by Pesaran and Shin (2001) is employed to examine both the long-term and short-term relationship between economic growth and the independent variables. ARDL approach is preferred when variables are a combination of mixed I(0) and I(1) variables (not I(2)), which makes it more flexible than other cointegration methods. One of the significant benefits of the ARDL method is that it can provide reliable estimates if the sample is small, and the variables have different lag structures (Pesaran et al., 2001).

The ARDL Bounds Test is used to detect a long-run equilibrium among the variables. If cointegration is established, the model is reparameterized into an Error Correction Model (ECM), which provides estimates of short-run dynamics and the speed of adjustment to a long-run path. This framework facilitates a more complete understanding of how variables interrelate over time and adjust to shocks (Nkoro & Uko, 2016). Overall, the ARDL approach represents a strong and effective time series method, especially with small samples and when the variables have varying levels of stationarity.

The ARDL bounds testing equation is formulated as follows:

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^{p} \alpha_1 \Delta GDP_{t-i} + \sum_{i=0}^{q} \alpha_2 \Delta DIR_{t-i} + \sum_{i=0}^{q} \alpha_3 \Delta log(IQ)_{t-i} +$$

$$\sum_{i=0}^{q} \alpha_4 \Delta(DIR \times log(IQ))_{t-i} + \sum_{i=0}^{q} \alpha_5 \Delta log(POP)_{t-i} + \sum_{i=0}^{q} \alpha_6 \Delta IR_{t-i} + \lambda_1 GDP_{t-1}$$

The hypothesis is as follows:

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ (No cointegration)

H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$ (cointegration exists)

The decision is made by comparing the F-statistic to the critical values for the bounds test. If the F-statistic exceeds the upper bound critical value, the null hypothesis of no cointegration would be rejected and, therefore, the evidence of long run relationship would exist. However, If the F-statistic falls below the lower bound critical value, we cannot reject the null hypothesis and the result shows no evidence of cointegration. If the F-statistic lies between the lower and upper bounds, the result is regarded as inconclusive.

3.5 Diagnostic Checking

After estimating the ARDL model, several diagnostic tests are conducted to make sure the results are accurate and reliable. These tests help identify any problems in the data or model that could affect the interpretation of the results. In this part, we will conduct 4 diagnostic tests which include heteroscedasticity, multicollinearity, normality, and autocorrelation.

3.5.1 Multicollinearity

Multicollinearity is when two or more independent variables in a regression model are correlated with one another. Correlation can inflate the standard errors, making it difficult to understand the unique impacts of each variable on the dependent variable. This study uses the Variance Inflation Factor (VIF) to evaluate multicollinearity as it measures the extent to which the variance of a regression coefficient is increased due to multicollinearity. The VIF begins by regressing each independent variable against all of the independent variables, and computing one minus the R-squared, and then taking the inverse of that value. Generally, a VIF value around 1 indicates that there is no multicollinearity present, while values above 5 suggest moderate correlation, and values above 10 indicate a serious problem with multicollinearity (Frost, 2023).

The formula of VIF is as follow:

$$VIF_j = \frac{1}{1 - R_j^2}$$

3.5.2 Heteroscedasticity

Heteroscedasticity describes a situation in which the variance of the error terms varies across observations. This condition is a violation of one of the OLS assumptions, which can result in estimators being inefficient and inference will be invalid. In this research, we implement the Autoregressive Conditional Heteroscedasticity (ARCH) test from Engle (1982) as a procedure to test for time varying variance in the residuals. The ARCH test requires us to run a regression of the squared residuals from the original model, into lagged values of the squared residuals.

The hypothesis is as follows:

H_0 : The model does not exhibit heteroscedasticity.

H_1 : The model exhibits heteroscedasticity.

3.5.3 Autocorrelation

Autocorrelation exists when there is time-based correlation between the residuals of a regression. In time series data, this is a common issue and can affect how reliable the estimates are. In OLS, autocorrelation violates the requirement that residuals remain independent across observations, which may generate biased standard errors and issues with hypothesis testing. In this study, the Breusch-Godfrey Serial Correlation LM Test is utilized to test for autocorrelation. Unlike the Durbin–Watson test, the Breusch-Godfrey test can detect both first-order and higher-order serial correlation (Breusch, 1978). The test consists of regressing the residuals from the initial model on the original explanatory variables along with their lagged residuals.

The hypothesis is as follows:

H_0 : The model is free from autocorrelation.

H_1 : The model contains autocorrelation.

3.5.4 Normality Test

The assumption of normally distributed residuals is crucial for regression analysis because many statistical tests, such as t-tests and F-tests, assume that the errors are normally distributed. Non-normally-distributed residuals can affect the validity of t-tests and F-tests, specifically in small sample sizes. This study employs the Jarque-Bera (JB) test to determine whether the residuals are normally distributed. In the JB test, the skewness and kurtosis of the residuals are evaluated and then compared to their theoretical values under the assumption of normality.

The value of the test statistic is calculated as follows:

$$JB = n\left[\frac{S^2}{6} + \frac{(K-3)^2}{24}\right]$$

The hypothesis is as follows:

H_0 : Normality exists in the error term.

H_1 : Normality does not exist in the error term.

For the diagnostic checks, the decision rule is as follows:

Reject H_0 when the p-value is less than the significance level, otherwise, retain H_0.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, we will discuss the data analysis we used to assess the relationship between the variables in the study. We are using E-view software to interpret the results. First, we conduct the Augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test, to assess the stationarity of the variables. Next, the Autoregressive Distributed Lag (ARDL) bounds testing approach was used to determine if a long-run relationship existed among the variables. Finally, it is important to perform diagnostic checks to assess multicollinearity, heteroscedasticity, autocorrelation and normality tests and ensure reliability of the regression results.

4.1 Unit Root Test

4.1.1 Augmented Dickey-Fuller (ADF) Test

Table 4.1: Table of results

Augmented Dickey-Fuller (ADF)					
	Level Form		First Difference Form		
Variables	Constant and No Trend	Constant and Trend	Constant and No Trend	Constant and Trend	Order of Integration
GDP	-0.8774	-2.8745	-6.2045	-6.4710	I (1)
	(0.3241)	(0.1886)	(0.0000)***	(0.0002)***	

DIR	-0.8354	-3.0913	-4.4159	-4.3296	I (1)
	(0.3426)	(0.1325)	(0.0001)***	(0.0132)**	
LIQ	0.2786	-3.1450	-6.5815	-6.6422	I (1)
	(0.7576)	(0.1210)	(0.0000)***	(0.0001)***	
IR	-0.6951	-3.7216	-3.6111	-3.3924	I (1)
	(0.4041)	(0.0474)**	(0.0012)***	(0.0857)*	
LPOP	0.4509	-2.0403	-2.0185	2.1823	I (1)
	(0.8014)	(0.5437)	(0.0445)**	(1.0000)	
DIR_LIQ	-0.8114	-3.6939	-5.3908	-5.2515	I (1)
	(0.3530)	(0.0445)**	(0.0000)***	(0.0020)***	

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

The table 4.1 above has shown the p-value and t-statistic of each variable in the ADF test. As per the results, all variables were non-stationary at level and stationary at first difference. GDP, institutional quality, and the interaction term achieve stationarity at first difference with 1% significance. The deposit interest rate is stationary at first difference (1% and 5% significance), inflation rate at both level and first difference, and population at first difference (5% significance).

4.1.2 Phillips-Perron (PP) Test

Table 4.2: Table of results

Phillips-Perron (PP) Test		
	Level Form	First Difference Form

Variables	Constant and No Trend	Constant and Trend	Constant and No Trend	Constant and Trend	Order of Integration
GDP	-1.1701	-2.7543	-6.2045	-7.0354	I (1)
	(0.2132)	(0.2268)	(0.0000)***	(0.0001)***	
DIR	-0.8216	-3.0114	-4.5377	-4.5842	I (1)
	(0.3485)	(0.1514)	(0.0001)***	(0.0079)***	
LIQ	0.6139	-3.1450	-6.2885	-6.6422	I (1)
	(0.8413)	(0.1210)	(0.0000)***	(0.0001)***	
IR	-0.3182	-3.2539	-7.7997	-7.7841	I (1)
	(0.5592)	(0.1001)	(0.0000)***	(0.0000)***	
LPOP	31.9759	3.3982	-1.1876	0.4341	Non
	(0.9999)	(1.0000)	(0.2070)	(0.9981)	stationary
DIR_LIQ	-0.7812	-3.6922	-5.9271	-7.3417	
	(0.3661)	(0.0446)**	(0.0000)***	(0.0000)***	

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

The results of Phillips-Perron (PP) test show all the variables except LPOP (GDP, DIR, LIQ, IR, and DIR_LIQ) are non-stationary at level and stationary at first differencing with 1% significance level, which indicates the variables are integrated of order one, I(1). This is consistent with the findings in the ADF test promoting the variables are suitable for ARDL. It is noted, LPOP was non-stationary even after first and second differencing, indicating that it is not integrated of I(0) or I(1).

4.2 Autoregressive Distributed Lag (ARDL) Approach

Table 4.3: Table of ARDL results

Panel A: ARDL Bound Test for Cointegration			
Model	F-statistic	Conclusion	
GDP = f (DIR, LIQ, LPOP, IR, DIR_LIQ)	8.2962		
Optimal Lag	(2,2,2,2,2,2)		
Critical Value	I(0)	I(1)	
significance level (1%)	3.06	4.15	
significance level (5%)	2.39	3.38	
significance level (10%)	2.08	3	
Panel B: Long Run Elasticities			
Variables	Coefficients	T-statistic	Probability
DIR	15.8056	7.6189	0.0047***
LIQ	355.0329	6.3753	0.0078***
LPOP	45.0046	3.7970	0.0321**
IR	-0.1709	-1.7934	0.1708
DIR_LIQ	-25.0793	-6.9688	0.0061***
Panel C: Short Run Parameter Values			
Variables	Coefficients	T-statistic	Probability
D (DIR)	10.6429	10.1179	0.0021***
D (DIR (-1))	-9.8211	-10.7380	0.0017***

D (LIQ)	174.9725	6.4709	0.0075***
D (LIQ (-1))	-197.8962	-9.7590	0.0023***
D (LPOP)	-311.9141	-0.5227	0.6373
D (LPOP (-1))	6998.851	7.2092	0.0055***
D (IR)	-0.2497	-12.4423	0.0011***
D (IR (-1))	0.0640	2.0131	0.1376
D (DIR_LIQ)	-17.2277	-9.4244	0.0025***
D (DIR_LIQ (-1))	16.1678	10.4232	0.0019***
CointEq (-1)	-1.3529	-13.1992	0.0009***

Panel A shows the results from the ARDL bounds testing procedure, which was conducted to determine whether a long-run relationship (cointegration) exists among the variables in the model. The optimal lag length for the model specification used was (2, 2, 2, 2, 2, 2), selected using the Akaike Information Criterion (AIC) for a model specification that is both concise and informative.

The calculated value of the F-statistic is 8.2962 as compared to the critical value for the upper and lower bounds at significance levels of 1%, 5%, and 10%. The F-statistic (8.2962) is larger than the upper bound value at a 1% significance value (4.15). Therefore, the null hypothesis of no cointegration is rejected. This result indicates a strong statistical evidence of a long-run equilibrium relationship between GDP and the independent variables included in the model.

The importance of this result is that the deposit interest rate (DIR), liquidity (LIQ), population (LPOP), interest rate (IR) and their interaction term (DIR_LIQ) do not just influence GDP in the short run, but they are also affected in long-run adjustments and growth trends in the economy. Therefore, it is appropriate to move forward and

estimate the long-run and short-run dynamics of this model through the use of an ARDL model.

4.2.1 Long Run Elasticities

According to results shown in Panel B, the model's long-term coefficients can be interpreted as follows:

$$GDP = \beta_0 + \beta_1(DIR) + \beta_2(LIQ) + \beta_3(LPOP) + \beta_4(IR) + \beta_5(DIR\_LIQ)$$

$$GDP = -637.9826 + 15.8056\,DIR + 355.0329\,LIQ + 45.0046\,LPOP - 0.1709\,IR - 25.0793\,DIR\_LIQ$$

According to the model above, the estimated coefficient for the Deposit Interest Rate (DIR) is 15.8056. Therefore, it can be implied that a 1% increase in the DIR in Nigeria will raise the GDP growth rate in Nigeria by 15.8056%, ceteris paribus. The results further reveal that DIR has a positive and statistically significant relationship with GDP growth at the 1% level (p-value = 0.0047). This positive relationship has mentioned that an increase in the deposit interest rate leads to a substantial increase in GDP growth rate over time. That means Nigeria can enhance the deposit interest rate in all financial institutions to improve economic development. Our result has met our expected sign we determined before, higher DIR will lead to higher GDP growth.

The institutional quality (LIQ) has a large positive coefficient of 355.0329, which is also statistically significant at the 1% level (p-value = 0.0078), suggesting a strong and positive long-run relationship with GDP growth rate. An improvement in institutional quality by 1 index will result in an estimated 355.0329% increase in GDP growth, assuming all other variables remain constant. This large coefficient indicates that institutional quality plays a key role in Nigeria's long-run economic development. Good institutions may encourage investor confidence, safeguard

property rights, minimize transaction costs, and enhance policy effectiveness. The result is also aligned with our expected positive sign, indicating that a stronger institutional quality supports a more efficient and productive economy.

The coefficient for the population variable (LPOP) is 45.0046 and is statistically significant at the 5% level (p-value = 0.0321), indicating a strong positive relationship between population growth and GDP growth in the long term, indicating that the economy will increase by 45% given a 1% increase in population, ceteris paribus. Economists argue that having a growing population will have a favorable economic outcome through increasing the labour force, boosting domestic consumption, and expanding the market size for goods and services. However, a rapid population increase may also present some challenges, since without an appropriate level of education, health care, and jobs, economic benefits may be offset by unemployment, public service pressure, and a lower per-capita growth (Chinda, 2025). Thus, policy measures are necessary to translate demographic opportunity into productive human capital for long-run benefits.

The result of the coefficient for inflation rate (IR) is –0.1709, which is consistent with our expected sign. The higher inflation will lead to a decrease in purchasing power and thus negatively impact investment and reduce long-run economic growth. Therefore, indicating that an increase of 1% in inflation rate, the GDP growth rate will drop 0.17% in Nigeria, by holding other variables constant. However, in the long-run estimation, the relationship between GDP growth rate and inflation is not statistically significant at the 10% level (p-value = 0.1708). This finding is consistent with Oranefo (2022), who reported that inflation had no statistically significant impact on Nigeria's economic growth during 1981–2016. One possible explanation can be found in Nigeria's high-inflation, supply-driven context. When inflation is driven by only one of the three following causes: food price shocks, import price shocks involving international currency fluctuations, currency devaluations or supply problems, it may have no effect (real output) or an uncertain effect on output. Doguwa and Sani I. (2012) indicated that inflation of a certain level, which is often

above 10% to 12% in Nigeria, does not have an influence on economic growth in a statistically detectable way.

Lastly, the interaction term of deposit interest rate (DIR) and institutional quality (LIQ) led to a long-run coefficient of -25.0793 and significant at 1% level (p-value = 0.0061) in our ARDL model. Even though the result has shown that there is a long-run relationship between interaction term and GDP growth rate, the result is unexpected for us. This is because the negative sign did not meet our expected positive sign. This indicates that even though DIR and LIQ can work to improve GDP growth individually, they may actually have no effect together on economic growth. According to Olaniyi & Oladeji (2021), the interaction between financial development and institutional quality can lead to a reduction of economic growth opportunities. Specifically, institutional quality may sometimes erode the growth effects of finance in sub-Saharan Africa. Mentioned, if institutions are poor, characterized by corruption, bureaucratic inefficiencies, or weak governance, then higher deposit rates can lead to greater levels of savings that are not allocated productively through additional borrowing, and therefore potential downside of economic growth. Likewise, Baruwa's (2022) study on Nigeria's inclusive growth found evidence that financial development interacts with weak institutions to negatively influence inclusive growth, suggesting ineffective channels for mobilising savings into economically productive investments. In summary, a high deposit interest rate may stimulate a greater flow of deposits, but if without an institutional framework in place to facilitate proper lending and investing, the savings are not likely to develop any increases in productive economic investment or may even worsen.

4.2.2 Error Correction Term

The error correction term (CointEq(-1)) has a coefficient of -1.35, which is negative and statistically significant at the 5% level (p = 0.0019). The coefficient -1.35 tells us

the speed at which GDP (dependent variable) adjusts back to long-run equilibrium after a short-run shock. A negative sign is expected and necessary, it means if the system deviates from equilibrium, it will move back towards it. This confirms the existence of a valid long-run equilibrium relationship between GDP and the independent variables in the model. While the magnitude of -1.35 suggests that about 135% of the disequilibrium is adjusted within a single period. This implies a rapid adjustment process, with the economy not only correcting deviations quickly but also potentially overshooting before stabilising at equilibrium.

4.3 Diagnostic Checking

4.3.1 Multicollinearity

In this research study, the correlations and VIF of the independent variables have been analysed to check for multicollinearity in the model.

Table 4.4: Table of the correlation between coefficients

Variables	**DIR**	**LIQ**	**IR**	**LPOP**
DIR	1.0000	-	-	-
LIQ	-0.4738	1.0000	-	-
IR	0.1504	-0.2762	1.0000	-
LPOP	-0.6872	0.2740	0.0946	1.0000

Table 4.5 Table of VIF results

Variables	Centered VIF
DIR	2.3644
LIQ	1.3654
IR	1.1640
LPOP	2.0511

Based on the table 4.4 above, we can conclude that the deposit interest rate (DIR) has a positive correlation with inflation rate (IR) at 0.1504, while has a negative correlation with institutional quality (IQ) and population (POP) at -0.4738 and -0.6872 respectively. Besides, institutional quality and inflation rate have a negative

correlation of -0.2762. For the population, there is a positive correlation of 0.2740 and 0.0946 with institutional quality and inflation rate.

Table 4.5 reports the centered VIF values for the independent variables. The findings reveal that all VIF values are quite low and remain below the benchmark of 10. As there is low pair-wise correlation between the independent variables (no extreme correlation above ±0.8) followed by high value of adjusted R-squared (97%), and much significant t-ratios. The results indicate that the model is free from multicollinearity.

4.3.2 Heteroscedasticity

To examine potential heteroscedasticity in the model, we conducted the ARCH test. The null hypothesis indicates the absence of heteroscedasticity, whereas the alternative hypothesis suggests the existence of heteroscedasticity.

Table 4.6: Table of ARCH test results

Autoregressive Conditional Heteroscedasticity test	
F-statistic	Probability
0.4564	0.4836

According to above, we fail to reject the null hypothesis as the p-value (0.4836) is greater than the significance level of 10%, 5%, and 1%. Hence, it is concluded that heteroscedasticity is not present in the model, and the variance of the residual is stable.

4.3.3 Autocorrelation

In this study, we applied the Breusch-Godfrey Serial Correlation LM test to assess the presence of autocorrelation. The null hypothesis suggests no autocorrelation, while the alternative hypothesis indicates that autocorrelation is present.

Table 4.7: Table of Breusch-Godfrey LM test results

Breusch-Godfrey Serial Correlation LM test	
F-statistic	Probability
5.7415	0.0054

Based on the table above, we have to reject the null hypothesis as the p-value (0.0054) is lower than the significance level of 10%, 5%, and 1%. In summary, the findings reveal the presence of autocorrelation in the model, which may affect the efficiency and accuracy of the estimated coefficients.

4.3.4 Normality

The Jarque-Bera (JB) test was applied to check the normality of the error term. According to the null hypothesis, the error term is normally distributed, whereas the alternative hypothesis indicates non-normality.

Table 4.8: Table of JB test results

JB test	
F-statistic	Probability
0.4495	0.7987

The table above shows that the Jarque-Bera p-value (0.7987) exceeds the significance level of 10%, 5%, and 1%. Therefore, there is insufficient evidence to reject the null hypothesis, indicating that the error term of the ARDL regression model follows a normal distribution.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

In this part, research ends with a summary of key findings and the relevant thoughts on the lessons learnt from the study. It also examined the policy implications of the results, noted the limitations of the study, and provided suggestions for future study. This study examined the effects of banking reform on institutional quality and economic growth in Nigeria using time series annual data from 1998-2020. More specifically, the study utilised the ARDL model to examine the long-run of the variables.

5.1 Summary of Study

The study aimed to examine the separate and interactive impacts of banking reforms (as measured by deposit interest rate) and institutional quality on GDP growth in Nigeria, while controlling for population and inflation. The ARDL model results confirmed the existence of a long-run relationship between the variables. The results show that both deposit interest rate and institutional quality exert a statistically significant positive long-run effect on GDP growth; while inflation has a negative long-run effect that is statistically insignificant, and population has a positive significant long-run effect on GDP.

Moreover, the interaction term between deposit interest measure and institutional quality is negative and statistically significant, suggesting that institutional weaknesses lessen the impact of banking reforms on economic growth. This signifies that, while both matters are stand-alone factors, when the two factors act together, the

effects become more context-dependent and nuanced. These findings support the theoretical underpinnings of Endogenous Growth Theory and Institutional Theory, confirming that well-functioning institutions are necessary for financial reforms to have positive effects on economic growth. Evidence from this study also showed that interest rate reform and institutional change may individually promote growth, yet the joint effect of institutional change and financial reform is conditional on good governance. This understanding will provide a crucial lens for decision makers to make sense of how to shape reform initiatives that are impactful and also respond to local institutional reality.

5.2 Policy Implication

The study's findings present significant implications for Nigeria's economic policy, especially with respect to financial sector reform, institutional development, and sustainable economic planning. Both deposit interest rate and institutional quality have a long-run positive impact on GDP growth. For policymakers this means that neither banking reform nor institutional reform will be effective in a vacuum. A concerted policy approach which links monetary and institutional reforms is required for continued economic stability and development. This is especially important in developing economies such as Nigeria where there are abiding problems of macroeconomic instability and institutional inertia that have historically impeded the attainment of policy objectives.

One key implication is the necessity for transparent and market-driven interest rate policies that encourage savings mobilization. It was apparent from this study that there was a significant positive relationship between deposit interest rate and GDP growth, which means that if interest rate liberalization was done appropriately, the savings mobilization mechanisms will lead to institutional and individual actions that would result in more savings and hence a greater source of loanable funds available to banks. With greater loanable funds, banks can lend to small and medium enterprises

(SMEs) and even new startups, and large production entities, and if firms have more resources, they can invest and have greater scope for innovation, productivity, and eventually growth in economy. Regulated interest rates can not only promote domestic capital formation, but aid in making the financial system more resilient in the long term (Adekunle et al. 2024).

Another significant implication is the essentiality of institutional quality in achieving the successful adoption of financial policies. This study shows that institutional quality has a strong and statistically significant positive effect on GDP growth; therefore, governance, regulatory quality, rule of law, and policy implementation is essential when considering economic outcomes. If an institution is weak, the likelihood of a well-written policy achieving the intended outcome is limited. Institutions are the rules of the game in economic and political interactions that lower uncertainty and transaction costs (North, 1990). Nigeria's policymakers must prioritize institutional reform so that transparency, accountability, and the judiciary are the earmarks of societal, political, and economic activities.

Institutional quality will be strengthened by anti-corruption efforts, an independent judiciary, and regulatory reform. These factors are critical to ensure that banking policy is free from the influence of political or private interests. The Nigerian financial sector faces challenges due to the embezzling of public funds, ineffectively enforced contracts, and unstable regulations. The reforms needed must be led by government institutions that reconcile the dual need for checks and balances, focus on digitalization of public services, and protect whistleblowers who rely on public service.

One of the unique and cautionary findings from this study is that the coefficient for the interaction term between deposit interest rate and institutional quality is negative and significant, suggesting that the advantages of deposit rate liberalization may be diminished or even reversed in weak institutional settings. This strengthens the argument that sequencing and coordination of policy matters financial liberalization should not be pursued without institutional reform taking place.

There are several implications for the Central Bank of Nigeria (CBN) and associated agencies. While the CBN is pursuing interest rate liberalization or monetary tightening, it must also pay attention to the state of institutional readiness for implementation. For example, the CBN should review prudential compliance by commercial banks, practices and oversight by the banking supervision department, and availability of consumer protection systems. There is room to enhance confidence in the financial system by strengthening the Nigerian Deposit Insurance Corporation (NDIC) and the Securities and Exchange Commission (SEC) with respect to consumer protection, which can improve confidence and attract investment in the financial system, and enhance the credibility of the financial sector generally.

Furthermore, financial inclusion should be part of Nigeria's reform agenda; having introduced banking reforms for decades, a large portion of its population, particularly in rural and underserved areas, are still excluded from financial services in the formal sector. By improving access to banking through mobile money, agent banking, and simple Know-Your-Customer processes, Nigeria can increase its savings base, improve access to credit and other financial services and reduce income inequality. Institutional quality is key to making financial inclusion work, especially in settings where there is little trust or the economies are informal (Abubakar, 2020).

Macroeconomic stability is also a key precondition for effective banking reforms. High levels of inflation, unstable exchange rates, and fiscal deficits can impair the ability of interest rates to function effectively and limit the amount of savings. Policymakers must establish ways to align interest rate policy decisions with other macroeconomic policies (including inflation targeting in the case of issuing central bank paper, exchange rate stabilization, and fiscal restraint). The benefits of the most extreme desire to reform banking could be neutralized in an unstable macroeconomic context. Therefore, it is important that the Ministry of Finance and a Central Bank work in harmony to generate an environment that allows for the economic framework

to be favourable for investment (and development that is institutionally grounded) and private sector development.

The examinations of this study add support to the wider theoretical tradition that development is institutionally situated. It has been established through Endogenous Growth Theory that policy that focuses on investment in physical and human capital will result in higher growth over the longer term. However, the findings from this study demonstrate that, even when policy is optimally presented, without institutional underpinning, policy may fail to be effective in many areas. Institutions enable the right environment for reforms to be enacted into tangible action. This is especially important for countries with weak institutions, to be aware of the necessity of inclusive political frameworks, transparent rule making and effective public delivery systems.

In conclusion, the Nigerian experience throws up a wealth of lessons for other developing countries that experience similar institutional and financial circumstances. Countries in similar situations should assess how to pursue synchronized reforms that build institutions and increase financial sector development. Neither can be addressed independently and tackling only one constitutes a half measure that will have little impact or increase inequality. Similarly, international development partners, such as the World Bank and African Development Bank, need to tailor their funding so as to include both support for monetary policy modernization but also for capacity building to reform institutions. These complementary efforts will ensure that both reform agendas lead to inclusive and sustainable growth.

5.3 Limitations of the Study

Although this study provides valuable insights, it is subject to limitations that are detailed in the following sections. Highlighting these issues enables other researchers

to benefit from the findings while also identifying areas for improvement in future research.

This study is focused solely on Nigeria, which allows for a nuanced understanding of context, but also limits the scope for generalizing findings. Nigeria's institutions, finances, and economy have specific attributes and features shaped by its colonial legacies, and these cannot easily be applied to countries with different governance characteristics, or with more stability in terms of macroeconomic management. This research addresses a gap in the literature since most existing studies use panel data for between-country comparisons, while this research utilizes time-series data to study large-scale trends in a single country, but has the trade-off of sacrificing comparisons across countries and may miss analyses of external factors influencing economic growth.

The last limitation relates to the number of variables used in the study. Using the deposit interest rate and institutional quality as proxies for banking reform and governance, respectively, is valuable, but they do not reflect every area of the financial sector (clients with credit risk, financial inclusion per population, advances in adoption of technologies). The ARDL model is appropriate for identifying long run relationships; however, the ARDL model cannot provide or it might assume structural breaks in a series, or how external shocks (such as oil price volatility or the COVID-19 pandemic) would affect the underlying relationships. The limitations proposed here suggest there is an interest and opportunity to explore more wide-ranging indicators and robust econometric techniques in future studies in a given economic environment.

5.4 Recommendations of the Study

In light of the findings and identified limitations, this study recommends that future research expand the geographical scope beyond Nigeria to include other countries, enabling cross-country comparisons and improving the generalizability of results.

Additionally, incorporating a broader range of variables such as credit accessibility, financial inclusion levels, capital adequacy ratios, and adoption of financial technologies would provide a more holistic view of how banking reforms influence economic growth. These enhancements would address gaps in the current study and capture more dimensions of the banking sector's role in economic performance.

Furthermore, it is recommended that future research adopt more advanced econometric techniques capable of detecting structural breaks and modelling the effects of sudden external shocks, such as oil price volatility, global financial crises, or pandemics like COVID-19. By doing so, researchers can produce more robust and reliable findings, particularly in economies that are prone to instability. Implementing these recommendations would not only strengthen the academic contribution of future studies but also provide policymakers and banking regulators with deeper insights to design and implement effective banking reforms.

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