BANK PROFITABILITY AND ECONOMIC GROWTH IN NIGERIA

BY

WINNER ONESHIORENA KELVIN

MGS1706572

DEPARTMENT OF BANKING AND FINANCE

FACULTY OF MANAGEMENT SCIENCES

UNIVERSITY OF BENIN,

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF BANKING AND FINANCE FACULTY OF MANAGEMENT SCIENCES UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR OF SCIENCE (B.SC.) DEGREE IN BANKING AND FINANCE

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DECLARATION

I, KELVIN WINNER ONESHIORENA, do hereby declare that this project is entirely my work and composition. The work embodied in this project has not been submitted by other candidates for any degree and is not currently being submitted for any other degree. All references made to the works of other persons have been duly acknowledged.

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KELVIN WINNER ONESHIORENA **DATE**

CERTIFICATION

We certify that this work was carried out by KELVIN WINNER ONESHIORENA with the matriculation number MGS1706572 in the department of banking and finance, university of Benin, Benin City.

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Mr. B.O. Isibor
DATE

(Project supervisor)

_____
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Dr. J. Obayagbona
DATE

(Project coordinator)

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Dr .O.G. Omorokunwa **DATE**

(Head of department)

DEDICATION

This project is dedicated to God almighty from whom I draw my ideas and inspiration from and for his unending love and mercy towards me to put this work together, to my amazing parents Mr. Micheal kelvin and Mrs. joy kelvin for their prayers, love and support that has made me who I am today and to the department of banking and finance.

ACKNOWLEDGEMENTS

I give thanks to God almighty for His love, Care and blessings. I also want to thank those in one way or the other, who contributed to the success of this work. I appreciate the efforts made by my supervisor, who saw me through the writing of this research project.

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ABSTRACT

The purpose of this study was to ascertain the effect of bank profitability on economic growth in Nigeria. However, in order to achieve the objectives of this study, we utilised four explanatory variables as proxies for bank profitability (credit to private sector, bank loans, bank return on assets and total assets to GDP) while real gross domestic product was used as a proxy for economic growth in Nigeria. The study covered a time period of 1995-2020 (26years). The descriptive statistics and regression analysis technique were adopted in carrying out the study's empirical analysis

Based on the empirical analysis, the following findings were arrived at: firstly, the study found that there is a positive and insignificant relationship credit to private sector and economic growth in Nigeria; second, the study found that bank loans have a significant effect on economic growth in Nigeria; third, bank return on assets have an insignificant effect on economic growth in Nigeria; and finally, total assets to GDP was found to have a positive and significant effect on economic growth in Nigeria.

In view of the salient findings from this study, the following specific policy recommendations were put forth: banks in Nigeria should lend more to the

private sector as doing so ensures they are lending to sectors that are likely to generate more income the loans granted which will culminate into a multiplier effect of enhanced economic growth performance in the long run; the apex monetary authority in Nigeria (CBN) should ensure that banks are regulated to give out more proportion of their income as loans to individuals, private sector and public sector; banks should not leave customers' deposits idle but should invest a large chunk of it on risk-free securities such as government bonds as well other risky securities with the adoption of effect risk management mechanism; and efforts should be made by banks to maintain continuous increase in their assets which could be by diversifying, opening more branches, among others.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Increasing a country's standard of living over time is known as economic growth. This is most commonly quantified by a country's GDP. Total factor productivity and growth ranges from real per capita output are two additional indicators of economic growth. Financial institutions' contributions to economic growth have been the subject of extensive research (Ekpenyong&Acha, 2011). A number of early economists, including Joseph Schumpeter (1911), acknowledged the importance of banks as intermediaries in promoting technological innovation. Achieving rapid economic growth, in his view, required the identification and funding of entrepreneurs with the highest probability of successfully implementing innovative products and manufacturing processes.

The financial sector is the umbrella term for a country's various banking and related institutions. The deposit money banking system in Nigeria is the most advanced part of the country's economic system (Okpala, Ezeanolue& David, 2018). Deposit money banks play a vital role in Nigeria's economy as financial intermediaries, helping the general populace and guaranteeing the country's

long-term prosperity. Indicators of the growth nexus between deposit money banks and economic expansion can be found in the deposit money banks' own activities. Since their inception, deposit money banks have been relied upon as a haven for customers. Customers can bring their valuables, including deposits, to them to be stored. They also make it possible to write checks against active accounts, which speeds up financial dealings. The deposit money banking system acts as a crucial conduit between savers and investors by making loans to businesses and individuals in order to stimulate economic growth (Okpala, Ezeanolue& David, 2018).

Nigeria's banking industry is crucial to the country's economy. It has helped facilitate financial mediation both inside and outside the country. The health of an economy's banking sector has profound effects on investment and capital formation (Igbinosa&Ogbeide, 2019). Successive governments in Nigeria have enacted policies to encourage the expansion and modernization of the banking industry in order to boost the country's economic output. The actual result was the complete antithesis of what was expected. Lawrence, Moni, and Elkhomun (2014) argue that insolvencies, low savings rates, and insufficient resource allocation are all the result of financially restrictive policies, political corruption/poor

macroeconomic management, and bank malfeasance, and thus explain why the financial system, and the banking sector in particular, remains significantly underdeveloped. Economic growth and poverty alleviation are said to be two of Nigeria's biggest challenges.

An effective banking system should be a major economic driver in both developed and developing countries by facilitating adequate fund mobilisation from surplus to deficit units of the economy, decreasing information asymmetry, transaction costs, agency and monitoring costs, fostering good corporate governance, and increasing shareholder wealth. Investment will rise if the efficiency of the financial system is enhanced, as stated by Olusegun, Ganiyu, and Oluseyi (2013). This is because the system will be better able to spot and fund lucrative business opportunities, mobilise savings, enable risk trading, hedging, and diversification, and smooth out the flow of goods and services. They go on to say that this leads to increased productivity, faster growth in capital stocks (both physical and human) and technological innovation.

1.2 Statement of the Research Problem

Research shows that a country's deposit money banking system significantly affects its GDP growth (Yakubu&Affoi, 2014; Aurangzeb, 2012; Olokoyo, 2011;

McKinnon, 1973; Shaw, 1973; Schumpeter, 1911). Considering the enormous and faultless roles played by this financial subsector in the expansion and development of an economy, this is to be expected. Furthermore, this ideal growth channel has been accepted in the Nigerian context, leading to a set of banking reforms and laws aimed at establishing a competitive, resilient, thriving, and healthy commercial banking system. The Central Bank of Nigeria was established in 1959 to regulate deposit money banks; the indigenization policy of 1977 encouraged Nigerian participation and reduced capital flight out of the sector; and the financial liberalisation that began in the mid-1980s (during the SAP period) led to explicit partial deregulation of the sector in an effort to boost competition and increase market efficiency (Okpala, Ezeanolue& David, 2018).

Contradictory results have been found in empirical research on the link between bank profitability and economic growth using different indices over time (Adekola, 2016; Igbinosa&Ogbeide, 2019; Okpala, Ezeanolue& David, 2018; Lawrence et al, 2014, Aigbovo&Osamwonyi, 2013; Igbinosa, 2012; King & Levine, 1993). In addition, there is a lack of consensus among experts on which way the correlation between bank credits and economic expansion actually points (Abdulsalam, 2013; Khan, Qayyum, &Saheed, 2005). Numerous qualitative and

quantitative factors have been identified in previous research and the economics literature that affect the growth of real output. However, there is some debate over whether or not bank profitability contributes to economic expansion. In his paper exploring the potential of bank credit as a tool for economic expansion, Agada (2010) identifies public and private sector credits as variables that affect GDP fluctuations. A number of studies, including those by Nwanyanwu (2010), Fadare (2010), and Odekun (1998), have used analogous variables to examine the relationship between bank credit and economic expansion. This research was undertaken with the hope of adding new perspectives on the topic of bank profitability and economic growth in Nigeria.

1.3 Research Questions

The following questions are relevant to the study:

i. What is the relationship between the ratio of credit to the private sector to gross domestic product and economic growth in Nigeria?

ii. What is the effect of banking sector loans and advances on economic growth in Nigeria?

iii. Is there any link between banking sector return on assets and economic growth in Nigeria?

iv. To what extent does the ratio of total assets to gross domestic product affect economic growth in Nigeria?

1.4 Objectives of the Study

The main objective of this study is to determine the effect of bank profitability on economic growth in Nigeria. Specifically, this study seeks to;

i. Ascertain the relationship between the ratio of credit to the private sector to gross domestic product and economic growth in Nigeria?
ii. Determine the effect of banking sector loans and advances on economic growth in Nigeria?
iii. Find out if there is any link between banking sector return on assets and economic growth in Nigeria?
iv. Investigate the effect of the ratio of total assets to gross domestic product on economic growth in Nigeria?

1.5 Hypotheses of the study

The following hypotheses, stated in their null form will be tested in this study;

i. There is no significant relationship between ratio of credit to the private sector to gross domestic product and economic growth in Nigeria.

ii. Banking sector loans and advances does not significantly affect economic growth in Nigeria.

iii. There is no significant relationship between banking sector return on assets and economic growth in Nigeria.

iv. The ratio of total assets to gross domestic product do not significantly impact economic growth in Nigeria.

1.6 Scope of the Study

Using the ratio of credit to the private sector to GDP, the ratio of banking sector loans and advances to GDP, the ratio of banking sector return on assets to GDP, and the ratio of total assets to GDP as indicators of deposit money banks' performance, and real gross domestic product (RGDP) as an indicator of economic growth in Nigeria, this study analyses the factors that contribute to the profitability of deposit money banks and their impact on GDP growth. The time period covered by the research is twenty-six (26) years (1995 to 2020). It is believed that this time frame is adequate for capturing the long-term variation in the efficiency and growth of Nigeria's deposit money banks. The annual statistical bulletin published by the Central Bank of Nigeria will serve as the data source for this study's time period of interest.

1.7 Significance of the Study

The study will be of immense benefit to bankers, government and researchers.

Bankers: Through this research, they will gain a deeper appreciation for how Nigeria's deposit money banks contribute to the country's overall economic development. Given the importance of their work to the growth of the Nigerian economy, this will go a long way toward helping them do their jobs effectively.

Government: Policymakers, legislators, and public speakers at all echelons of the Nigerian government will find the findings of this study useful in furthering the country's economic development.

Academicians and Researchers: The results of this study will be useful for academics, students, and researchers because they deepen our comprehension of the role that banking sector performance plays in driving economic expansion. If you're interested in learning more about how the Nigerian banking sector affects the country's GDP, you can use this study as a starting point.

1.8 Limitations of the Study

Management sciences research studies typically deal with non-experimental data, which are not manipulated by the researcher. As a result, it may be difficult to gauge how much the profitability of Nigeria's deposit money banks has

contributed to the country's GDP growth due to a lack of oversight. To the extent possible, this restriction will be alleviated through the use of appropriate statistical tools, including descriptive statistics, Pearson correlation, and Ordinary Least Square (OLS) methods, and adherence to data from the Central Bank of Nigeria Statistical Bulletin.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter investigates the perspectives and arguments of previous research in this field. Thus, it examines the conceptual review, theoretical review, and empirical literature regarding the impact of banking sector profitability on Nigeria's economic growth.

2.2 Conceptual Review

2.2.1 Deposit Money Banks (DMBs)

DMBs are depository banks or deposit money banks, and they perform a wide range of services, including accepting deposits from customers (the surplus unit) and lending that money to those customers (the deficit unit) who need it for investment purposes. A deposit money bank is a bank that accepts deposits and lends money, among other services (Investopedia, 2017). Customers of deposit money banks can choose from a number of different types of deposits and investments, including savings accounts and Certificates of Deposits. Any deposit-taking financial institution is qualified to extend credit in the form of

consumer loans, commercial loans, and mortgages. Commercial banking is defined by the Central Bank of the Nigeria (CBN) as "the business of accepting deposits from customers and making loans to them in return for cash, bills of exchange, government bonds, or other collateralized or unsecured promises of repayment from businesses" (2016). The central idea behind this banking concept is that a bank exists primarily to borrow people's money so that they can make loans to people who need them (Nwakoby, Sidi&Ofobruku, 2018).

Commercial banks that accept deposits are called deposit money banks, and they operate for the benefit of their shareholders (Ramadhani, 2015). Financial institutions like banks that hold a country's deposit money act as a bridge between the country's surplus and deficit (demand side). The role of deposit money banks in lending to the economy, especially in times of severe economic distress, was brought to a new level of clarity by the financial crises of 2007-2010 (Li, 2007).

2.2.2 Profitability

Tulsian (2014) argues that an investment is profitable if and only if it generates a profit. Success in business is measured by its ability to turn a profit (Buvaneshwaran& Bai, 2015). One indicator of a business's success is its profit

margin. The word profitability comes from two separate words: "profit" and "capability" (Tulsian, 2014). He elaborates that profit indicates the current operating performance and efficiency of a company, while ability indicates the earning power or operating performance of a company in the future. According to Lakhtaria (2013), profitability is the capacity to turn a financial gain.

That a business can turn a profit both now and in the future is what is meant by the term "profitability" (Lakhtaria, 2013). Profitability is often used interchangeably with efficiency, but it is also used as a gauge of efficiency and a benchmark against which improvements can be made (Enekwe, Okwo&Ordu, 2013). Although the terms are often used interchangeably, profit and profitability are distinct concepts. In contrast to profit, which is a measure of operational performance in and of itself, profitability evaluates performance in comparison to other similar businesses (Tulsian, 2014; Ali &Imdadul, 2014). Despite profitability analysis' widespread acceptance as the gold standard for gauging things like capital employed productivity and operational efficiency, the bottom line ultimately doesn't matter.

The term "profitability" can also refer to the amount of money left over from a business's revenue after deducting its costs for a given time frame (Al-Jafari& Al

Samman, 2015). The authors continue by arguing that maximising profits is crucial to a company's survival, calling it "one of the most important goals that management strives to achieve." A company's profitability is essential to its survival in a competitive market, has a significant impact on its performance, and helps drive economic growth (Sohail, Iqbal, Tariq &Mumtaz, 2013).

The primary goal of banks is to increase their shareholder capital. In order to do this, the bank must generate adequate and reasonable profits, keep its cash flow positive, decide whether to pay dividends or retain earnings, and commit to long-term investments. Banks' bottom lines will always be the gold standard for evaluating the efficiency and effectiveness of their management. The bank's primary strategic goal is to maximise its profits, with all other goals and objectives taking a back seat. This is essential so that the bank can continue to pay off its debts as they come due.

The profit-wealth maximisation objective of a business was the subject of discussion and criticism in Jensen and Meckling's (1982) work. The critics claimed that corporations routinely engage in unethical practises in service of maximising profits. Bribery of public officials with excessive profits, pollution of the environment, and so on are all examples (Smith, 2003). Despite these

concerns, businesses must generate a profit or else investors will be hesitant to fund their operations out of fear of a poor return on their money (Friedman, 1970). The financial performance variables reviewed in this section of the study are Return on Assets, Return on Equity, and Tobin's Q.

Return on Assets (ROA)

Return on assets is a measurement of how effectively an organisation has utilised its assets to generate returns over a period of time. Return on assets is defined by Baulkaran (2014) as the ratio of earnings before interest, taxes, and depreciation (EBITD) to the firm's total assets. This definition or metric is preferred because it takes into account the tax and depreciation accounted for in earnings as well as the source of financing used to generate returns. According to Liu, Miletkov, Wei, and Yang (2015), return on assets is the revenue/returns prior to extraordinary earnings divided by the company's total assets. Return on assets is also defined as the ratio of a period's profits to the total amount of assets invested during that period. A higher return on assets ratio indicates that the company is efficient and effective at generating net income from its available assets (Lyn & Aileen, 2008).

Another opinion by Sila, Gonzalez, and Hagendorff (2016) defines return on assets as the ratio of a company's after-tax profit to its Net asset value. Their research revealed a negative correlation between total risks and asset return. Typically, when risks increase, a company's return on assets decreases significantly. This may be due to the organization's increasing capital-debt structure.

Return on Equity (ROE)

Return on equity is the ratio of shareholder returns to shareholder investments. When the ROE is high, it indicates that the shareholder's investment was utilised effectively to generate greater returns. This ratio helps specify the proportion of a company's profit relative to the amount of shareholder capital (Lyn & Aileen, 2008). The percentage of dividends paid to shareholders cannot be determined using the ROE ratio because dividend decisions are typically dependent on the stock price movement of a company. However, ROE is a metric for determining whether a company can generate returns on investment risk (Berman, Knight & Case, 2013).

Tobin’s Q

James Tobin developed this market-based (ratio) measure of financial performance. He stated that the cost of replacing a company's assets is equal to their current market value, so assets should be reported at their current market value rather than their book value. To determine this, a ratio is calculated by dividing the equity's market value by the cost to replace its current assets.

A ratio (Tobin's Q) value greater than one indicates that the company has effectively utilised its available assets and may need to acquire additional current assets to meet its operational expenses and obligations. While a ratio (Tobin's Q) less than one informs investors that the company may be undervalued and presents a potential buyout opportunity. Tobin's Q ratio has become one of the most popular methods for determining the value of a company when making investment decisions. Therefore, there has been a call for researchers to utilise this metric of financial performance (Bhagat& Bolton, 2013; Jeremias &Gani, 2014; O'Reilly, Caldwell, Christman, &Doerr, 2014).

Baulkaran (2014) is another proponent of the Tobin's Q ratio for measuring financial performance. He defines the Tobin's Q ratio as the current value of a company's common stock and liabilities relative to its total assets.

2.2.3 Overview of Banking in Nigeria

1892 marked the beginning of banking in Nigeria with the establishment of the African Banking Corporation (Nwakoby et al., 2018). Despite the fact that the majority of the first banks were foreign-owned, the 1930s saw the establishment of numerous indigenous banks. The majority of these indigenous banks failed within a few years of their founding, making Nigeria the first nation to experience bank failure. The colonial government responded by enacting the Financial Ordinance in 1952, which marked the beginning of efforts to control Nigeria's banking industry. In July 1959, the Central Bank of Nigeria (CBN) was established and given control over the Nigerian banking system.

In the 1970s, financial repression and indigenization strategies dominated the Nigerian banking sector. The repression policy included interest rate controls, selective credit standards, and fixed exchange rate regimes. The indigenisation policy of the government aimed to nationalise all foreign-owned banks in Nigeria. Financial repression and indigenization policies compelled the Federal Government to launch the Structural Adjustment Programme (SAP) in 1986, when it became evident that the macroeconomic crisis could not be resolved without a fundamental and comprehensive policy shift. SAP has had a significant

impact on a variety of Nigerian financial system indicators, including interest rate structure, institutional growth, reorganisation of money and capital market operations, and various non-deposit taking investment houses. Therefore, financial liberalisation has been implemented to increase financial savings, reduce investment decision distortions, and encourage more effective intermediation between savers and investors, thereby promoting rapid economic growth (CBN, 2004).

The first phase of financial reform commenced in August 1987 with the deregulation of interest rates; later that year, restrictions on licencing new banks were loosened, resulting in a dramatic increase in the number of existing banks in the country. The Federal Government established the Nigerian Deposit Insurance Corporation (NDIC) in 1988 with the intention of enhancing banking sector security and public confidence. In 1992, the federal government sold equity stakes in eight deposit money banks and six commercial banks in order to privatise them.

In 2004, the CBN launched a thirteen-point reform programme for the Nigerian banking industry, marking the beginning of the consolidation period. The reform was intended to consolidate and increase the capital of Nigerian banks

(Owolabi&Ogunlalu, 2013). As part of the reform enacted in July 2004, the minimum capital of Nigerian banks increased from N2 billion to N25 billion on December 31, 2005. Prior to the era of consolidation, there were 89 commercial banks in Nigeria. In 2009, the "Project Alpha Initiative" post-consolidation revamp was launched in response to the poor state of Nigeria's banking industry during the crisis.

Significant gains in the financial sector were documented following the consolidation of the banking sector, including the formation of 25 well-capitalized banks from the previous 89 institutions. Capital market funds totaling N406.4 billion were raised by the banks. In addition, the procedure resulted in foreign capital inflows of $652 million and £162,000 sterling. The liquidity provided by capital injections into banks precipitously lowered interest rates in 2005, while lending to the real sector increased by an unprecedented 30,8 percent. (Adebisi, 2014).

However, not long after, the global financial and economic crises struck, leading to the failure of numerous financial institutions worldwide. The financial crisis diminished the gains made by Nigeria's financial services sector from the banking sector consolidation initiative. Global trends have had an impact on industry

experience, on the other hand. As a result of the global financial crises, a portion of the banking industry was severely impacted, with some banks in critical condition and facing liquidity issues due to their significant exposure to the capital market in the form of margin trading loans, which stood at approximately N900 billion at the end of December 2008. This represented approximately 12.0% of the total industry credit or 31.9% of shareholder capital. In addition, high oil prices harmed an industry sector that was overly dependent on the oil and gas industry. At the end of December 2008, the total exposure of banks to the oil industry was approximately N754.0 billion, representing more than 10% of the industry's total and more than 27% of shareholders' capital (Anyanwu, 2010).

Near the end of 2008, excessive exposures caused significant liquidity issues for certain banks. As part of its liquidity support, the CBN Discount Window was expanded in October 2008 to accommodate money market instruments such as Bankers' Acceptances and Commercial Papers. As of June 2009, the total commitment of banks operating under the Expanded Discount Window (EDW) exceeded N2,688.84 billion, with more than N256.0 billion in outstanding commitments, the majority of which was owed by less than half of the banks in operation. When the CBN replaced the EDW with guaranteed interbank

placements, it was discovered that the same banks were the primary net-takers under the guarantee arrangement, indicating that they had severe liquidity issues. The CBN conducted additional research and determined that the banking sector crisis was precipitated by eight interconnected factors. Unexpected capital inflows and macroeconomic instability are examples, as are poor corporate governance and character failure; a lack of investor and consumer sophistication; inadequate disclosure and lack of transparency; critical gaps in the regulatory framework and regulation; uneven supervision and enforcement; CBN weaknesses; and business environment weaknesses (CBN, 2011). Likewise, the CBN established the Assets Management Corporation of Nigeria to address the liquidity crisis in the banking sector (AMCON). Consequently, the number of deposit money banks (DMBs) in Nigeria decreased to 20 by the end of the 2011 fiscal year, with 5,810 branches (Alabede, 2012).

2.2.4 Economic Growth

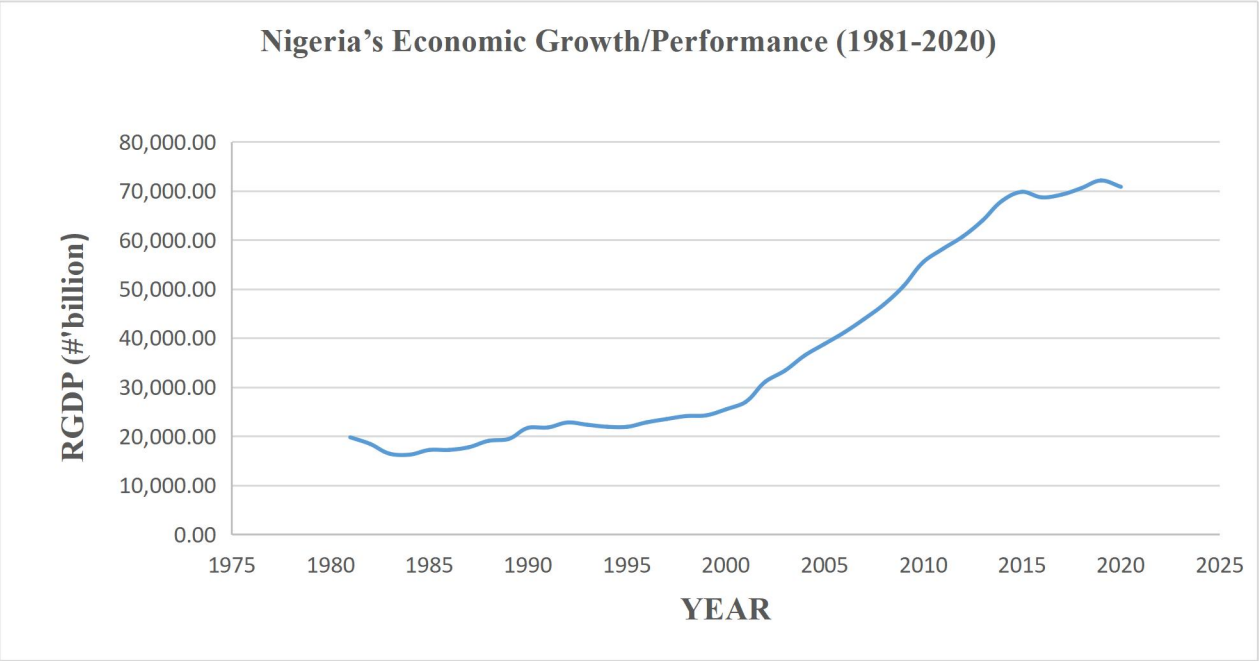
Commonly, economic growth is defined as a rise in Gross Domestic Product (GDP). It is also defined as an increase in a country's national output of goods and services or an increase in the volume of national output over a given time period. Economic development is a less precise and more complex term that cannot be

easily reduced to quantitative measurement in monetary terms alone, whereas economic progress is commonly understood to be the rate at which the annual output of goods and services grows in real terms. It involves a multitude of variables, all of which pertain to the existence of man (Okeke, Mbonu, &Amahalu, 2018). Economic development is a broader concept than economic growth, as defined by Abomaye-Nimenibo, Eyo, and Friday (2018). It focuses on changes in the quality of economic desires, goods, incentives, institutions, productivity, and knowledge. It represents the progression of the social system as a whole. This implies that poverty, unemployment, and inequalities may continue to exist despite an economy's growth. Thus, economic growth is defined as an increase in the total output of an economy over a given period of time.

2.2.4.1 Gross Domestic Product

The gross domestic product (GDP) is the monetary value of all finished goods and services produced within a country's borders during a specified time period. GDP includes all private and public consumption, government spending, investments, private inventories, paid-in construction costs, and the foreign balance of trade (exports plus imports) (Yaro, &Adeiza, 2021). GDP is a broad indicator of a nation's economic activity.

Commonly, GDP is employed as an indicator of a country's economic health and a measure of its standard of living. GDP can be used to compare the productivity of different countries with a high degree of precision because the method of measuring GDP is standardised across nations. Adjusting for inflation from one year to the next enables a seamless comparison of current GDP measurements with those of prior years or quarters. Thus, the GDP of any given period can be expressed as a percentage of the GDP of previous periods (Ndum, Okoye, &Amahalu, 2019).



Source: Author (CBN, 2021)

As depicted in the preceding graph, the trend of real GDP has been rising steadily throughout the observation period. Between 1981 and 1984, there was a slight decline. This could be attributed to the oil glut of the 1980s, which led to decreased export earnings and a greater reduction in domestic and foreign debt. It began to rise in 1984 and continued to rise until 2001. Between 2001 and 2015, it increased considerably. As a result of the Nigerian economy's economic recession (slowdown in economic activities) in 2016, the real gross domestic product (RGDP) recorded a negative growth rate (a downward trend) in 2016. The RGDP reached its highest point in 2019 during the period under consideration. The severe economic impact of the COVID-19 epidemic on the Nigerian economy may have contributed to a decline in output in 2020.

2.2.4.2 Gross National Income

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

inflation) to smooth out the effects of transitory fluctuations in exchange rates when calculating GNI in U.S. dollars (Lotfaliany et al., 2018).

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

The International Comparison Program (ICP) is the mechanism used to calculate PPP rates. The ICP coordinates the collection of price data for a common basket of goods and services in approximately 200 countries, applies appropriate weights to the basket's various components, and calculates linking factors between regions

to produce global PPPs. The most recent PPP rates were published in 2020 and pertain to the collection year of 2014. (Qiu& Li, 2021).

2.2.4.3 Per Capita Income (PCY)

It is also presumed that economic growth occurs when the standard of living of the population rises. Real per capita income can also be used as an indicator of economic growth, as it is regarded as the most accurate measure of the population's average standard of living (Yumashev, lusarczyk, Kondrashev, and Mikhaylov, 2020). From the perspective of the United Nations, the phrase "underdeveloped countries" is ambiguous. They used it to refer to nations with low PCY relative to the United States, Canada, Australia, and Western Europe (Higgins, 1963 cited in Panth, 2016). According to Lewis (1955), the best measure of development is per capita output.

The World Bank classifies nations based on their GNP per capita. Previously, gross national income (GNI or GNP) was estimated by converting various countries' currencies into US dollars using simple exchange rates. Currently, the World Bank uses the Atlas conversion factor instead of simple exchange rates to mitigate the impact of exchange rate fluctuations on cross-country comparisons of

national incomes. The Atlas conversion factor for any given year is the average of a country's exchange rate for that year and its exchange rate for the two preceding years, with the difference between domestic and international inflation rates taken into account.

2.2.4.4 Full Employment

Less developed countries are characterised by widespread and disguised unemployment. Therefore, employment levels are used as another indicator of economic growth. However, full employment cannot be a goal in and of itself; it must be achieved in tandem with industrial growth and structural change. The employed population should be able to contribute materially to the economy, rather than simply finding work for the sake of having a job (Myint& Krueger, 2016).

Furthermore, unemployment is not limited to developing countries. During a recession, "developed" countries experience massive unemployment. Therefore, the type of unemployment is important, as there are different types of unemployment, such as voluntary or involuntary unemployment, technical unemployment (i.e., labour using older technology being replaced by mechanised

technology, such as typists replaced by computers), structural unemployment (when the structure of the economy changes and traditional modes of production and consumption are replaced by modern, e.g., cars replacing horse-drawn carts, or educated unemployment vs. unemployment of menial labor, and so on (Panth, 2016).

2.2.5 Banking Sector Performance and Economic Growth

Banks' efficiency, cost management skills, and ability to turn a profit are all important metrics, but money creation is the most fundamental. The industry's performance is reflected in a number of ways, including: increased branch networks, which help with employment of both clerical and non-clerical workers; increased lending to various sectors of the economy as a result of a larger capital base; stronger banks with healthier balance sheets; innovation in banking product / service delivery; advancements in technology and globalisation of industry operations; and the creation of middle- and lower-level positions (Yakubu&Affoi, 2014).

To perform at their highest levels, banks need the support of the highest regulatory body. There should be no room for randomness in the growth of any economy's real sector; the CBN must intervene to guarantee that monetary policy

goals are always met. As a means of preventing the waste of tax dollars and encouraging responsible behaviour among borrowers, criminal prosecution of defaulting debtors is warranted. This will make the banking system more efficient, as more money will be available for productive investment, and the money and capital markets will flourish, leading to faster economic expansion (Yakubu&Affoi, 2014).

Economists disagree on whether or not the banking industry is a direct cause of economic growth. For instance, Schumpeter (1934) argued passionately for the importance of the banking sector to fostering economic expansion. He pointed out that the banker intervenes between the people who have productive resources and the people who want to form new combinations. In essence, he is a development phenomenon, but only under conditions where no authoritative figure dominates social change. In effect, he gives people permission to form new combinations on behalf of society and makes it possible for them to do so. In other words, he is the ephor of the market for exchanging goods and services (Schumpeter, 1934).

However, Harrison et al. (1999) argue that banks' profitability and activity are tied to the health of the economy. Improved access to financial services and the efficiency of financial intermediaries both cause reductions in financing costs,

which in turn stimulate capital accumulation and growth, as noted by Bayraktar and Wang (2006), demonstrating that openness in the banking industry has both a direct and indirect effect on economic growth. Global financial institutions had a significant impact on domestic banks, as demonstrated by Bayraktar and Wang (2004). Poor loan portfolio quality, a lack of collateral, insufficient bank capitalization, and political pressure to refinance unprofitable enterprises lead to soft budget constraints and frequent bank bailouts, according to Berglof and Roland (1995). Positive though it may have been, the effect of Northern Cyprus's financial development on the expansion of the economy, as reported by Guryay, Veli, and Tuzel (2007), was small. When looking at the economic literature, one can find a plethora of possible qualitative and quantitative explanatory variables that affect the rate of growth of per capita output over time. For instance, Tuuli (2002) uses the ratio of banks' claims on the private sector to GDP, the annual consumer price index, and the interest rate margin to analyse the connection between finance and economic growth. Balogun's (2007) theoretical models included variables such as money supply, minimum rediscount rates, private sector credit, banking industry credit to government, private sector credit to stock market capitalization, and exchange rates.

2.3 Theoretical Review

2.3.1 The Credit Channel Theory

The concept of a "credit channel" was first proposed by Bernanke and Gertler. According to this school of thought, the direct effects of monetary policy on interest rates are amplified by endogenous changes in the external finance premium. When asked to define "external finance premium," they settled on the difference between external borrowing costs and internal borrowing costs. More so, the finance premium is directly proportional to the degree of credit market imperfection, and a shift in monetary policy that raises or lowers open market interest rates typically has the same effect on external finance (Bernanke &Gertler 1995). Additionally, they linked monetary policy to the external finance premium through the Balance Sheet and Bank Lending Credit Channels (Bernanke &Gertler 1995).

2.3.2 The Balance Sheet Credit Channel Theory

This theory emphasised that a borrower's ability to pay the premium for access to external financing. In turn, this improves the borrower's financial standing by lowering the cost of borrowing money from outside sources and relaxing overall credit constraints. The hypothesis also postulated that a borrower's investment and

spending habits would be affected by the quality of their credit. As a result of central bank policy shifts, this balance sheet channel has emerged, which impacts not only market interest rates but also the borrowers' individual financial situations (Angelopoulou& Gibson, 2007).

2.3.3 Neoclassical Model of Growth

Neoclassical growth, as described by Ray (1998), is an economic theory that explains how a constant rate of economic growth can be achieved through a harmony between labour, capital, and technology. According to Khan (2003), this method emphasises the role of technological progress in economic expansion. The thesis states that if technological progress is not made, economic growth will inevitably come to an end.

More than 40 years ago, Nobel laureate economist Robert Solow created the neoclassical model of growth. As a neoclassical economic model, Solow-Swam predicts exponential growth in the long run. Capital accumulation, labour or population growth, and advances in productivity, commonly referred to as technological progress, are all factors it investigates in an effort to explain sustained economic growth. According to the Solo, real GDP grows at the same rate as the workforce plus a factor to account for improving productivity once the

capital to labour ratio rises because the marginal product of extra units of capital falls. When output, capital, and labour all grow at the same rate, leading to stable output per worker and capital per worker, as stated by Shaw (1992), a steady-state growth path is achieved. According to neoclassical economists who follow the Solow model, raising the trend rate of growth for an economy requires raising the supply of labour as well as the productivity of both labour and capital.

2.3.4Harrod-Domar model

Both Prof. F. Harrod and EvseyDomar independently developed this model in 1939 and 1949. The Harrod-Domar model was originally created to help with business cycle analysis, but it has since been modified to take economic growth into account as well. It suggested that growth depends on the efficiency of both labour and capital, with higher levels of investment leading to greater levels of capital accumulation, which in turn drives economic growth. The model posits that saving more money and making better use of existing funds for investment are necessary conditions for sustained economic expansion.

By including labour in the production process and non-fixed capital-output ratios, Solow Swam improved upon the Harrod-Domar model. Harrod-Domar emphasised the importance of savings and investment as primary factors in

economic growth. Inversely related to economic growth are measures of the saving rate and the capital-output ratio. It suggests that a well-balanced economic expansion is not a necessary consequence of economic growth. An increase in the rate of savings makes it possible to put more money into fixed assets. Increased output of goods and services is one key driver of economic growth. The capital-to-output ratio measures how much investment is needed to produce one dollar in output. It's a symbol of how well machines can do their jobs. Because of this efficacy, a smaller capital-output ratio is associated with faster economic expansion (Khan, 2003).

2.3.5 The Financial Liberalization Theory

Initially proposed in 1973, this concept was developed by McKinnon and Shaw. Government intervention in financial markets is viewed as the central theoretical obstacle to growth, investment, and mobilisation of savings. Savings mobilisation, financial asset ownership, economic growth, and capital accumulation are all stunted when governments in developing countries meddle with interest rate regulation and credit allocation to productive economic sectors. By limiting depositors' potential return on investment, interest rate ceilings indirectly

discouraged financial savings, leading to a surplus of cash outside of the banking sector (Savanhu, Chinzara&Ezeoha, 2011).

When the government is heavily involved in the financial system through its supervisory and regulatory framework, especially in the areas of interest rate management and credit distribution, this can lead to market distortions in the financial sector. Thus, financial mediation is weakened when the government meddles with people's ability to make sound investment and savings decisions. Due to this, a country's economy will experience a significant downturn (Savanhu, Chinzara&Ezeoha, 2011).

McKinnon and Shaw argue that a free market approach to allocating credit and liberalising financial markets should be the overarching philosophy. Low-yielding projects will be phased out and the real interest rate will be returned to its natural level. Consequently, the total amount of real credit available will rise, and the efficiency of savings and investment will improve. In return, this would lead to more investment, which would boost the economy. Fundamental criticisms of the theory of financial liberalisation have been based on the imperfect information paradigm. The Inexactness Model Financial development issues like information asymmetry and credit rationing due to high information costs are studied, and

arguments against financial liberalisation are presented (Savanhu, Chinzara&Ezeoha, 2011).

Stiglitz and Weiss (1981) state that there are two major worries brought on by knowledge asymmetry. Two issues arise from the implementation of financial liberalisation and reform policies: (a) adverse selection under an imperfect information paradigm and (b) moral hazard, the impact of information asymmetries on increased interest rates. This can easily lead to financial crises as it encourages more risk-taking in the economy and endangers the stability of the financial system.

2.3.6 The Quantity Theory of Credit

In an effort to develop a quantity theory of disaggregated credit and foreign capital flows, Werner proposed the Quantity Theory of Credit, with a focus on separate equations of exchange distinguishing between money used for GDP-transactions and money used for non-GDP-transactions. Aside from that, he emphasised the significance of not defining money as bank deposits or other aggregates of private sector savings. And rather than being seen as merely intermediaries in the transfer of pre-existing capital, banks should be regarded as the creators of new capital through the act of lending. Further, expanding

economic activity necessitates more monetary transactions; this, in turn, necessitates a rise in the quantity of money in circulation, which can only occur if banks issue more credits. Credit extended by banks can be broken down into two broad categories: those that contribute to GDP and those that do not. The former determines GDP in nominal terms, while the latter determines the market value of assets traded (Werner, 1992).

Therefore, the impact of bank credit depends on its quantity and quality, with the latter being defined by whether the credit was used for productive operations (credit for consumption, leading to unsustainable consumer inflation, or asset transactions, leading to unsustainable asset inflation) or not (delivering non-inflationary growth). The use of credit for productive purposes is sustainable, while the use of credit to acquire assets is not (Werner, 1992).

2.4 Empirical Literature

The effect of deposit money banks on economic growth and development is of interest to many academics in both developed and developing economies.

Using two-stage least square and granger causality tests, Akpansung and Babalola (2009) analysed the effect of bank credits on the expansion of the Nigerian

economy between 1970 and 2008. Bank credit is correlated with slower GDP growth in Nigeria, suggesting a negative feedback loop.

Based on her analysis of OLS econometric techniques, Nwanyanwu (2010) concluded that bank credit has a positive and significant effect on the expansion of the Nigerian economy.

Josephine (2010) analyses the effect of bank credit on economic development in Nigeria using deposit money banks as a case study. Measures of economic activity such as GDP and home-grown credit are substituted. The study's findings indicate that bank credit has had a negligible effect on the expansion of the Nigerian economy. This is because financial institutions are not interested in providing loans to the private sector for productive purposes, such as the agricultural sector. In order to stimulate economic development, it is recommended that banks be open to providing both short-term and long-term loans for productive purposes.

To assess the effect and direction of causality between banks and economic growth across the regimes of intensive regulation, deregulation, and guided deregulation, Obademi and Elumaro (2014) reexamine the financial repression hypothesis. Causality analysis and ordinary least squares regression both show

that banks significantly contribute to economic growth in Nigeria, especially during periods of deregulation. Even so, financial institutions appear to be causality-agnostic with regards to growth.

Yakubu and Affoi, 2014, examined the effect of deposit money bank credit on economic growth in Nigeria using the Ordinary Least Squares technique. They found that deposit money bank credit significantly affects economic growth in Nigeria, but only if sustained with significant effort. It was suggested that bad debt information be shared among banks, that agriculture and manufacturing be given priority when it comes to loan granting, and that a better and stronger credit culture be promoted and maintained.

In a related vein, Shittu (2012) studied the effect of financial intermediation on GDP growth in Nigeria. As a time series, we used data from 1970 to 2010. Through Cointegration Testing, Unit Root Testing, and the Error Correction Model Using the Engle-Granger method, the paper proved that financial intermediaries significantly affect GDP growth in Nigeria.

Financial growth and economic expansion in Pakistan were studied by Khan, Qayyum, and Saeed (2005) using the autoregressive distributed lag method from 1971 to 2004. They found that in the long run, financial depth contributed to

economic growth, while having no effect in the short run. Economic growth was stimulated by an increase in the investment-to-GDP ratio, but this effect was temporary and of little consequence in the long run. The real deposit rate was also found to have a positive effect on economic expansion in the study.

Between the years of 1960 and 2002, Sanusi and Salleh (2007) studied the connection between financial development and economic growth in Malaysia. The ratios of broad money to GDP, banking-system credit to GDP, and deposit money banks to GDP are commonly used indicators of financial growth. The study found that the ratio of broad money to GDP and bank credit have a positive and statistically significant long-run impact on economic growth when analysed using the Autoregressive Distributed Lag Approach.

In 2014, researchers Tripathy and Pradhan looked into how progress in India's banking sector influenced the country's overall economic expansion. In their research, Tripathy and Pradhan (2014) looked at the broad money supply as a proxy for the size of the financial system and the maturity of financial intermediaries. Using the correlation matrix and the granger causality method, Tripathy and Pradhan (2014) found a positive bidirectional relationship between

broad money supply and economic growth. This finding suggests that rising GDP can lead to a rise in broad money supply and vice versa.

Petkovski and Kjosevski (2014), in contrast to Tripathy and Pradhan (2014), used the quasi money supply as a measure of the size of the financial sector development, which they deemed adequate in developing countries due to the predominance of the banking sector and a lack of data on other financial assets. To estimate the regression and identify the connection between GDP growth and quasi money supply, Petkovski and Kjoseviski (2014) employed the dynamic panel method. Similar to Pradhan and Tripathy (2014), Petkovski and Kjosevski (2014) found a positive and statistically significant coefficient for the quasi money variable, indicating that progress in the banking sector contributes to economic expansion in the selected countries of southern and eastern Europe during the time period under consideration. The results lend credence to the hypothesis of financial repression theory, which values the importance of the financial sector to the economy.

To determine the effect of financial development on economic growth, other authors, like Odhiambo (2004) and Chucku and Agu (2009), have used the broad money supply to GDP as a proxy for measuring the depth of banking sector

development. With the granger causality test of the co-integration and error-correction model, which works well in both large and small samples, Odhiambo (2004) investigated the relationship between economic growth and financial development in South Africa. However, Chucku and Agu (2009) analysed the same data for Nigeria using the Multivariate Vector Error Correction Model (VECM). Both Odhiambo (2004) and Chucku and Agu (2009) found only a unidirectional relationship between M2 and GDP expansion. However, the Neo-Classical Model of Growth, which does not account for the role of finance in economic growth, is supported by the arguments of Odhiambo (2004), Chucku and Agu (2009).

Timsina (2014) looked into how private sector bank credit in Nepal influenced GDP growth. In line with the financial repression theory, this research used the popular Co-integration and Error Correction Model to find evidence of a long-run positive relationship between bank credit extended to the private sector and economic growth. Ogege and Shiro (2012) used a similar approach to Timsina (2014) to investigate the effect of bank deposits on economic growth in Nigeria and found a positive correlation between bank credit and GDP expansion.

Panel integration and co-integration techniques were applied to a dynamic heterogeneous panel of 15 OECD and 50 non-OECD countries from 1975 to 2000 by Apergis, Fillipidis, and Economidou (2007), who then identified causal links between financial deepening and economic growth. The finance growth nexus suggests that the significance of the impact of financial development on economic growth varies depending on the level of development of the country and the financial indicators used; therefore, the study evaluated the impact of three different measures of financial development. Bank credit, as measured by bank credit extension to the private sector as a percentage of GDP, and private sector credit, as measured by bank and financial institution credit extension to the private sector as a percentage of GDP, make up two of the three measures used in the study. Bank credit and private credit were both found to have positive and statistically significant estimated coefficients across all country groups using the Dynamic Ordinary Least Squares method, indicating a positive relationship. In addition, the results point to a two-way causal connection between financial development and economic expansion, with the latter causing the former.

Aurangzeb (2012) took the banking sector's efficiency into account when evaluating the banks' impact on economic growth in Pakistan. The efficiency of

the banking sector was proxied by Aurangzeb (2012) using variables such as profits and interest income. The author used multiple regression analysis and the Granger Causality Test to determine the direction of causality between efficiency and economic growth. Aurengzeb (2012) found that profits and interest income greatly contribute to economic expansion in Pakistan. More so, the causality test showed a two-way street running from profits to growth, and another running from interest income to expansion.

By analysing previous research on the subject, Martynova (2015) compiled evidence on how much of an effect bank capital requirements have on GDP expansion. According to Martynova (2015), there is scant evidence of a direct effect, and instead, studies have focused on indirect effects like the effect of bank capital on credit supply, bank asset risk, and bank capital cost, all of which can have an impact on economic growth. Further, he stated that in the face of increased capital requirements, banks can either (1) reduce lending, (2) increase equity, or (3) decrease asset risk.

To analyse the effect of bank capital on economic activity, Gross, Kok, and Zochowski (2016) employed a Mixed-Cross Section Global Vector Autoregressive model for the 28 EU economies and a sample of 42 significant

listed European banking groups. The study found that if capital ratio requirements for banks were raised, economic activity in EU countries would fall significantly. The Institute for International Finance (2011) conducted a study that supports the findings of Gross et al. (2016). The study covers a variety of regulatory reforms, including new capital, in the United States (US), Eurozone, Japan, the United Kingdom, and Switzerland. The study found that from 2011 to 2015, US bank lending rates increased by around 5 percentage points in response to regulatory reforms following the financial crisis of 2008/09, while GDP growth decreased by around 3 percentage points compared to the no-reform level. Higher capital requirements in banks are often viewed as a threat to economic growth, but in his paper, Admati (2011) argues that this is an incorrect assumption. Admati (2011) argues that banks are able to continue lending despite increased capital requirements because they are prompted to fund with relatively more equity. It seems there is scant empirical evidence to support Admati's (2011) claim, despite his persuasive argument.

The effects of bank liquidity on Nigeria's economic growth were studied by Ojiegbe, Oladele, and Makwe (2016). Using information from the Central Bank of Nigeria statistical bulletin for the years 1980-2013, Ojiegbe et al. (2016)

conducted an Ordinary Least Square (OLS) regression analysis and an econometrics co-integration test. Through an OLS analysis, researchers found that total bank credit ratios positively correlate with economic growth in Nigeria, suggesting that increased bank liquidity causes a subsequent rise in bank credit ratios and, in turn, economic growth. Research by Fidrmuc, Fungacova, and Weill (2015) on the effect of bank liquidity creation on economic growth in Russia corroborate this conclusion. The authors used data on the macroeconomy and banking sector from 2004-2011, applying the fixed effect model with benchmark regression. Based on the results, we can conclude that banks' role in liquidity creation contributes to economic expansion (measured by a positive coefficient).

2.4 Gaps in Literature

According to the aforementioned literature review, there have been inconsistent findings regarding the correlation between the banking industry and economic growth measured by different indices over different time periods (Adekola, 2016; Igbinosa&Ogbeide, 2019; Okpala, Ezeanolue& David, 2018; Lawrence et al, 2014, Aigbovo&Osamwonyi, 2013; Igbinosa, 2012; King & Levine, 1993). Also, academics can't seem to agree on which way the correlation between bank credits and GDP expansion actually points (Abdulsalam, 2013; Khan, Qayyum, &Saheed,

2005). Numerous qualitative and quantitative factors have been identified as contributing to the expansion of real output in previous research and the economic literature. However, there is a lot of debate over whether or not the success of the banking sector contributes to overall economic expansion. Public and private sector credits are identified by Agada (2010) as variables that cause fluctuations in GDP in a paper focusing on the use of bank credit as a tool for economic growth. Several researchers, including Nwanyanwu (2010), Fadare (2010), and Odekun (1998), used analogous variables in their analyses, which focused largely on bank credit and economic expansion. The authors of this study hope to open up new avenues of inquiry by examining the relationship between the success of Nigeria's deposit money banks and the country's overall economic expansion.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter deals with the method of data analysis used in the study. It entails the following relevant procedures such as research design, population and sample size, sources of data, theoretical framework, model specification, method of data analysis and measurement of variables.

3.2 Research Design

The study used the longitudinal survey (expost facto) research design. This method entails the use of historical data to gain knowledge about some phenomenon over a period of time, as well as quantitative, statistical or regression method in evaluating the research issues or problems.

3.3 Population and Sample

The population of the study is the Nigerian economy while the sample size consists of the total quoted deposit money banks in Nigeria for the period 1995 to 2020. The judgmental sampling technique was employed to arrive at the sample size. The judgmental sampling techniqueis a non-probability sampling technique

where the researcher selects units to be sampled and directly approach his target audience based on his fore knowledge.

3.4 Sources of Data

The data for this study is an annual times series data covering a period of 26 years (1995 to 2020). These data would be sourced from the Central Bank of Nigeria Statistical Bulletin (2020).

3.5Theoretical Framework

This study was based on the financial intermediation theory.Besley and Bringham (2009) emphasised that the presence of intermediaries improves economic well-being. They further explained that financial intermediaries were created to fulfil specific needs of both savers and borrowers, and to reduce the inefficiencies that would otherwise exist if users of funds could get loans only by borrowing directly from savers.

3.6 Model Specification

Thus, the functional form of the model for this study is stated as follows:

RGDP = f(CTPS,BLOANS, BROA, ASS/GDP)……..……..……3.1

However, in econometric form, the above model is restated as:

$RGDP = \beta 0 + \beta_1 CTPSt + \beta_2 ROAt + \beta_3 BDEP\ t + \beta_4 ASS/GDPt + Ut$ …….....3.2

Where:

RGDP = Real Gross Domestic Product (a proxy for Economic Growth)

BLOANS = Bank Loans

BROA = Banking sector return on assets

CTPS = Credit to Private Sector

ASS/GDP = Assets to GDP

U_{it} = is the error term

Apriori expectation = $\beta_1, \beta_2, \beta_3, \beta_4 > 0$:

3.7 Measurement of Variables

3.7.1 Dependent Variables

Economic growth was chosen as the dependent variable in the course of this study. Real gross domestic product will be used as a proxy of the dependent variable economic growth.

3.7.2 Predictors/Explanatory/Independent Variables

Credit to private sector (CTPS), Bank loans (BLOANS), Banking sector return on assets (BROA), and total assets to GDP (ASS/GDP).

The measurements and operationalization of all the variables of the study are presented below:

Table 3.1: Measurement of Variables

Variable	**Item**	**Abbreviation**	**Measurement**
Dependent	Real gross domestic product	RGDP	Inflation-adjusted measure of the value of all goods and services produced in an economy.
Independent Variable	Credit to private sector	CTPS	Total credit of deposit money banks to the private sector
Independent Variable	Bank loans	BLOANS	Total loans disbursed by deposit money banks.
Independent Variable	Banking Sector Return on	BROA	Aggregate banking sector return on assets

	Assets		
Independent Variable	Total assets to GDP	ASS/GDP	Ratio of totals assets to GDP.

Source: Author's compilation (2022).

3.8 Method of Data Analysis

Three methods are used; these are the unit root tests (which help to ascertain the stationarity property of the data set in order to avoid spurious regression results; correlation coefficient (which helps to establish the background status and characterization of the data in order to ascertain the relationship between bank profitability and economic growth in Nigeria). We perform also the Ordinary Least Squares (OLS) estimation technique which is the Best, Linear Unbiased Estimator. It is based on the minimization of the sum of squares residuals of the model. The coefficients obtained from the estimation are then used to verify the working hypotheses of the study.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This section focuses on the analysis and interpretation of the completed work to date. According to Pyndricks (2005), data sets are meaningless until they are presented and interpreted by the user or researcher. The empirical analyses are conducted in the subsequent sections.

4.2 Presentation of Results

Results for descriptive statistics, correlation matrix, and ordinary least squares are presented. The correlation results investigate the univariate relationship between the study's variables. In addition, it provides some information regarding the lack of multicollinearity.

4.2.1 Descriptive Statistics

Table 4.1 Descriptive Statistics

	RGDP	CTPS	BLOANS	BROA	ASSGDP
Mean	40347.57	7081910.	5673.686	1.174286	0.259439
Median	37298.95	6310048.	4956.610	2.020000	0.286604
Maximum	69799.94	17436986	14585.06	3.260000	0.587638
Minimum	11332.25	204090.6	122.8300	-12.83000	0.018923
Std. Dev.	20095.35	6476539.	5404.173	3.338282	0.192118
Skewness	0.212471	0.324632	0.479188	-3.737479	0.215676

Kurtosis	1.516374	1.533422	1.696237	16.28827	1.667764
Jarque-Bera	2.580199	2.786762	2.836475	203.3964	2.124327
Probability	0.275243	0.248235	0.242140	0.000000	0.345707
Sum	1049037.	1.84E+08	147515.8	24.66000	6.745426
Sum Sq. Dev.	1.01E+10	1.05E+15	7.30E+08	222.8825	0.922729

Source: Author's Computation from E-view 10.0.

Table 4.1 highlights the individual characteristics of the variables utilised in this study, including their mean, maximum and minimum values, standard deviation, and Jarque-Bera statistics (normality Test). According to Table 4.1's descriptive results, the study included 26 observations for all variables, or a 26-year time series from 1995 to 2020. The average value of the real gross domestic product (RGDP) is 40,347.57, with a maximum of 69799.94 and a minimum of 11332.25. It also had a high standard deviation of 20,095.35 when compared to other study variables (BLOANS and ASS/GDP). It was positively skewed, with frequent large increases and small decreases, as indicated by its positive skewness. This indicates that the real gross domestic product is more likely to increase than decrease. The real gross domestic product exhibited Palykurtic behaviour, as indicated by its low kurtosis value. The real gross domestic product had a Jarque Bera value of 2.5802 and a probability value of 0.2752, both of which were within the acceptable range, indicating that it is normally distributed.

Credit to the private sector has a mean value of 7081910, a maximum of 17436986, a minimum of 204090.6, and a standard deviation of 6476539, making it the variable with the greatest deviation from the mean. A positive skewness indicated that the distribution was skewed, with frequent large increases and small decreases. Low kurtosis values (a Platykurtic trend) were observed in CTPS, indicating the distributions contained few outliers. Additionally, it recorded a Jarque Bera value of 2.7868 and a probability value of 0.2482, both of which are within the acceptable range, indicating that the CTPS is normally distributed.

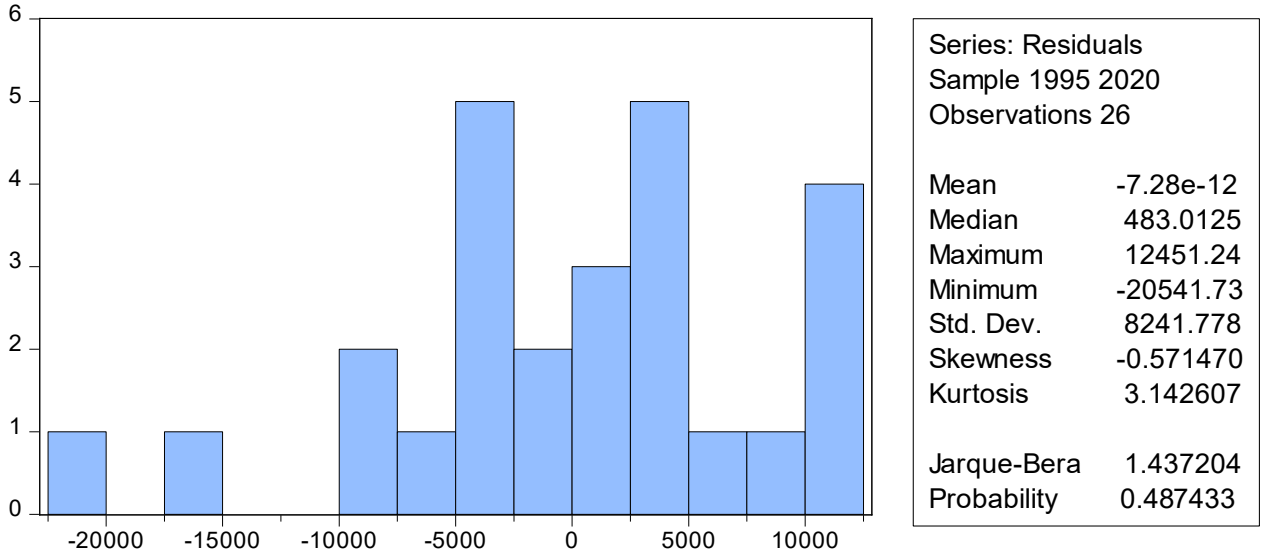
The average value of bank loans is 5673.686 dollars, with a maximum of 14585.06 dollars and a minimum of 122.83 dollars, and a standard deviation of 5404.173 dollars. A positive skewness indicated that the distribution was skewed, with frequent large increases and small decreases. Low kurtosis values (a Platykurtic trend) were observed for BLOANS, indicating that the distributions contained few outliers. It also recorded a Jarque Bera value of 2.8364 and a probability value of 0.2421, both of which fall within the acceptable range and indicate that BLOANS is normally distributed.

The average return on assets (ROA) for the banking sector is 1.174, with a range between 3.26 and -12.83. It also had a standard deviation that was relatively low,

3.338%. Negative skewness indicates that the distribution was skewed, with frequent large decreases and small increases. This indicates that the return on assets of the banking sector tends to decrease more often than it increases. The banking sector's return on assets exhibited Leptokurtic behaviour, as indicated by its high kurtosis value. The banking sector return on assets had a Jarque Bera value of 203.3964 and a probability value of 0.0000 that fell outside of the acceptable range, indicating that it is not normally distributed.

The ratio of assets to gross domestic product has a mean of 0.2594, a maximum of 0.5876, a minimum of 0.0189, and a standard deviation of 0.1921, which is the smallest deviation from the mean among the variables. A positive skewness indicated that the distribution was skewed, with frequent large increases and small decreases. Low kurtosis values (Platykurtic trend) were observed in ASS/GDP, indicating that the distributions contained few outliers. A Jarque-Bera value of 2.1243 with a probability value of 0.3457 indicates that ASS/GDP is normally distributed and falls within the acceptable range. Nonetheless, the overall normality test was performed as depicted in Figure 4.1 below.

Figure 4.1. Histogram Normality Test



The above Histogram Normality Test displays the regression variables' normality and other mean statistics (Fig 4.1). The JargueBera statistic was low at 1.42 with a corresponding probability value of 0.487 (48.7%), as indicated by the result. Since the p-value is greater than the 5% (0.05) threshold, the null hypothesis of 'normal distribution' cannot be rejected. This implies that the distribution of the population residuals (u) has been observed to be normal, which is desirable.

4.2.2 Correlation Analysis

The results of the correlation analysis shed light on the nature and direction of the association between the dependent and independent variables. Although the correlation coefficient does not imply functional dependence between variables, it

is a good starting point for investigating the degree and direction of their relationship. The results are presented and discussed in greater detail below:

Table 4.2: Correlation Analysis

Correlation t-Statistic Probability	RGDP	CTPS	BLOANS	BROA	ASSGDP
RGDP	1.000000 ----- -----				
CTPS	0.656030 8.112699 0.0000	1.000000 ----- -----			
BLOANS	0.631532 7.333623 0.0000	0.993845 43.95146 0.0000	1.000000 ----- -----		
BROA	0.669988 8.643866 0.0000	0.991320 36.93839 0.0000	0.975913 21.91484 0.0000	1.000000 ----- -----	
ASSGDP	0.612537 6.828839 0.0000	0.985235 28.19189 0.0000	0.975324 21.64215 0.0000	0.984890 27.86072 0.0000	1.000000 ----- -----

Source: Author's Estimation from EView 10, 2022.

As seen, real gross domestic product was positively correlated with CTPS (r= 0.656, p=0.0000), implying that increased credit to private sector was associated with real gross domestic product, which is significant at 5%. There was a positive correlation between real gross domestic product and BLOANS (r= 0.6315, p=0.0000), implying that increases in the volume of cash giving by banks to

investors and other stakeholders was associated with higherreal gross domestic product, and this relationship is significant at 5%. Real gross domestic product was also positively correlated with BROA (r= 0.6670, p=0.0000), implying that increases in the deposit money banks' return on assets were associated with higher economic growth as measured by RGDP, which was statistically significant at 5%. Finally, in the case of ASS/GDP, a positive correlation with real gross domestic product (r= 0.6125, p=0.0000) was observed, implying that increases in the ratio of banks' assets to GDP is associated with higher real gross domestic product, which is significant at 5%.

4.2.3 Diagnostics Test

The reliability of the estimation and data analysis econometric models was determined using the Variance Inflation Factor test, Serial Correlation, Heteroskedascity, and Ramsey RESET tests, and the results are presented below.

4.2.3.1 Multicollinearity Analysis

The presence of multicollinearity among independent variables indicates that they are perfectly correlated. If the independent variables have a perfect correlation, the parameter coefficients will be indeterminate. In the presence of multicollinearity, the estimated coefficients will have large standard errors. The

variance inflation factor test was used in this study to test for multicollinearity. The end result is as follows:

Table 4.3 Variance Inflation Factor Test

Variable	Centered VIF
CTPS	1.198923
BLOANS	1.304594
BROA	1.536031
ASSGDP	1.928843
C	NA

Source: Author's Estimation from EView 10, 2022.

Before conducting the regression, the variance inflation factor was used to test for multicollinearity between the variables (VIF). Essentially, the VIF explains how much of the variance of a regressor's coefficient estimate has been inflated due to collinearity with the other regressors. Essentially, VIFs greater than 10 are regarded as a cause for concern. As can be seen, none of the variables had VIF values greater than 10, indicating that there was no serious indication of multicollinearity. As a result, the study's variables are free of the problem of multicolinearity, implying that we can proceed with the execution of other diagnostic tests to determine the suitability of the Ordinary Regression Analysis techniques.

4.2.3.2 Test for Serial Correlation

Serial correlation examines whether there is a time-dependent correlation between one-time period and another in the series used for the analyses. The presence of time period correlation will result in serial correlation, which will have a significant impact on the reliability of model estimation. It may result in a high significant value, inefficient estimation, exaggerated goodness of fit, and incorrect coefficient of regression sign (positive or negative). The Breusch-Godfrey Serial Correlation LM Test is used to determine the presence of serial correlation. The null hypothesis states that there is no serial correlation.

The Decision Rule: The decision rule is to reject the null hypothesis if the p.value is less than 0.05

Table 4.4: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.767915	Prob. F(2,19)	0.1976
Obs*R-squared	4.079352	Prob. Chi-Square(2)	0.1301

Source: Author's Estimation from EView 10, 2022.

Table 4.4 shows an F-statistic value of 1.7679 and a probability value of 0.1976, which is greater than 0.05. This indicates that the model does not contain serial correlation (of time series). This confirms that the nature of the relationship

(negative or positive) as determined by the OLS estimation is correct and true of the model characteristics. This implies that the outcome of the OLS hypothesis test may provide an accurate picture of the impact of bank profitability on economic growth in Nigeria.

4.2.3.3 Heteroskedasticity Test

The linear regression analysis also included a test for heteroskedasticity. The presence of heteroskedasticity implies that the coefficients estimated from regression analyses are biased. The presence of heteroskedasticity indicates that the model's error variance from the data observations is unequal. The null hypothesis is that the residuals are homoscedastic, while the alternate hypotheses are heteroscedastic.

The Decision Rule: The decision rule is to reject the null hypothesis if the p. value is less than 0.05 level of significance.

Table 4.5: Breusch-Pagan-Godfrey Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.861243	Prob. F(4,21)	0.1062
Obs*R-squared	12.50018	Prob. Chi-Square(4)	0.0140
Scaled explained SS	8.736160	Prob. Chi-Square(4)	0.0680

Source: Author's Estimation from EView 10, 2022.

The Breusch-Pagan-Godfrey test has an F-statistic of 1.8612 and a probability value of 0.1062. We cannot reject the null hypothesis that the residuals are homoscedastic because the probability value is greater than 0.05. As a result, we conclude that the model contains no heteroscedasticity. This indicates that the estimated model's output is not skewed. To proceed, we perform stability diagnostics by using the Ramsey RESET Test to check for the presence of errors in the model specification.

4.2.3.4 Stability Diagnostics

Table 4.6: Ramsey RESET Test

Ramsey RESET Test
Equation: UNTITLED
Specification: RGDP CTPS BLOANS BROA ASSGDP C
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.671953	20	0.1101
F-statistic	2.795427	(1, 20)	0.1101
Likelihood ratio	3.401520	1	0.0651

Source: Author's Estimation from EView 10, 2022.

The Ramsey RESET Test was used to determine the presence of specification errors in the study's model. The null hypothesis assumes that the model is correctly specified, whereas the alternative hypothesis states that it is not. As a

result of the Ramsey RESET Test results, the P. value of the t-stat, f-stat, and likelihood ratio, which are 0.1101, 0.1101, and 0.0651, respectively, are all greater than the 0.05 significance level, implying that the model is correctly specified and that the model is not suffering from an omitted variable problem. Therefore, we can proceed with the Ordinary Least Regression for appropriate inferences.

4.3 Presentation and Ordinary Least Square Regression Analysis

This section accounted for ordinary least square regression analysis estimates and the result is briefly discussed below:

Table 4.7: OLS result

Dependent Variable: RGDP
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CTPS	0.005833	0.005451	1.070205	0.2967
BLOANS	3.484161	3.908746	2.891376	0.0088
BROA	11.40048	7.130642	2.598802	0.0048
ASSGDP	166576.8	58773.67	2.834208	0.0099
C	27708.74	3909.265	7.087967	0.0000

R-squared	0.831790	Mean dependent var	40347.57
Adjusted R-squared	0.799751	S.D. dependent var	20095.35
S.E. of regression	8992.517	Akaike info criterion	21.21721
Sum squared resid	1.70E+09	Schwarz criterion	21.45916
Log likelihood	-270.8238	Hannan-Quinn criter.	21.28688
F-statistic	25.96107	Durbin-Watson stat	1.441797

Prob(F-statistic)	0.000000

Source: Author's Computation Using E-View Version 10.0

Essentially, the result from the OLS in Table 4.7 revealed that a 1 unit change in CTPS would lead to a 0.0058 increase in real gross domestic product, but this effect is insignificant at 5% significance level. This finding is in line with the apriori expectation that as more and more credits are provided to the private sector, these funds are invested by them on diverse investment portfolios which has the inherent favourable multiplier effect on economic growth performance in the long run. Furthermore, the result from the OLS revealed that a 1 unit change in BLOANS would lead to a 3.484 increase in real gross domestic product, and this effect is significant at 5% significance level. This finding is in line with the apriori expectation that bank loans can serve as an instrument for expansionary economic effect, that is, increase in bank loans increases the amount of money in circulation which enhances the level of economic activities and as a consequence the economic growth performance. Also, the result from the OLS revealed that a 1 unit change in BROA would lead to a 11.40 increase in real gross domestic product, and this effect is insignificant at 5% significance level. This finding is in line with the apriori expectation that increases in the financial performance of

banks (ROA) has the capability of improving the level of economic activities in the long run. Finally, the result from the OLS revealed that a 1 unit change in ASS/GDP would lead to a 166576.8 increase in the real gross domestic product, and this effect is significant at 5% significance level. This finding is in line with the expectation that banks' asset is a major indicator of their financial strength and as such the ratio of their assets to GDP therefore represents how many unit of GDP is their assets, as such, increases in this ratio is expected to improve the economic growth performance of Nigeria.

Table 4.7 above shows that the coefficient of determination (R^2) is 0.8318 with adjusted R^2 value of 0.80, which shows that the explanatory power of the variables is strong. This implies that about 80% of the variations in real gross domestic product are explained by the variations in credit to private sector, bank loans, bank return on assets, and banks' total assets to GDP.

Furthermore, the F-test was applied to check the overall significance of the model. The Fstatistic is instrumental in verifying the overall significance of an estimated model. Table 4.7 shows f-statistics value of 25.96 with its probability value of 0.000000 which is highly significant. This indicates that credit to private sector,

bank loans, bank return on assets, and banks' total assets to GDP have a joint significant effect on real gross domestic product in Nigeria.

The Durbin Watson D-Statistic obtained was 2.23 which can be approximated to 2. This means that there is no auto correlation in the model. Hence, the model can be used for realistic forecasts.

4.4 Test of Hypotheses

In this section, the hypotheses formulated earlier in the study were tested for empirical significance and the results are presented below. The t value in the OLS result which measures the individual significance of the variable and the probability values were used.

4.4.1 Test of Hypothesis One

Ho: There is no significant relationship between ratio of credit to the private sector and economic growth in Nigeria.

Based on the t-statistics value of 1.070 and probability value of 0.2967 in Table 4.7 which is statistically insignificant, we reject the alternative hypothesis and accept the null hypothesis. This implies that the relationship between credit to private sector and real gross domestic product in Nigeria is not statistically significant.

4.4.2 Test of Hypothesis Two

Ho: Banking sector loans and advances does not significantly affect economic growth in Nigeria.

Based on the t-statistics value of 2.89 and its probability value of 0.0088 in Table 4.7 which is statistically significant, we accept the alternative hypothesis and reject the null hypothesis. This implies that banking sector loans and advances have a significant effect on economic growth in Nigeria.

4.4.3 Test of Hypothesis Three

Ho: There is no significant relationship between banking sector return on assets and economic growth in Nigeria.

Based on the t-statistics value of 2.599 and its probability value of 0.0048 in Table 4.7 which is statistically significant, we fail to accept the null hypothesis and accept the alternative hypothesis. This implies that banking sector return on assets significantly affect economic growth in Nigeria.

4.4.4 Test of Hypothesis Four

Ho: The ratio of total assets to gross domestic product do not significantly impact economic growth in Nigeria.

Based on the t-statistics value of 2.83 and its probability value of 0.0099 in Table 4.7 which is statistically significant, we reject the null hypothesis and accept the alternative hypothesis. This implies that the relationship between ratio of total assets to gross domestic product and economic growth in Nigeria is statistically significant.

4.5 Discussion of Findings

The study found that there is a positive and insignificant relationship credit to private sector and economic growth in Nigeria. This finding conforms withNwanyanwu (2010) who discovered that bank credit has a positive and significant impact on the growth of the Nigerian economy. On the other hand, Josephine (2010) found that bank credit has had little impact on the Nigerian economy's growth. She further stated that could be due to the banks' apathy in lending to the private sector for productive purposes, such as the agricultural sector, because they prefer to lend to the short-term end of the market. It is suggested that banks be willing to make both short and long-term loans for productive purposes, as these will eventually lead to economic growth.

The study also found that bank loans has a significant effect on economic growth in Nigeria. Contrarily, Agbanike, Onwuka and Eyoghasim (2016) indicated that

bank lending (commercial bank credits to economy) has significant negative impact on output growth. Yakubu and Affoi (2014) discovered that deposit money bank credit has a significant impact on Nigerian economic growth, but that it requires a concerted effort to maintain and sustain.

Furthermore, the study found that banking sector return on assetshas a significant effect on economic growth in Nigeria. This finding conforms with that of Abubakar and Gani (2013) who showed that the financial performance of banks has significant positive impact on economic growth.

Finally, ratio of bank total assets to GDP was found to have a positive and significant effect on economic growth in Nigeria. Similarly, Sanusi and Salleh (2007) discovered that the ratio of assets to GDP, as well as credit provided by the banking system, have a positive and statistically significant long-run impact on economic growth. Tripathy and Pradhan (2014) established a positive bidirectional relationship between assets to GDP and economic growth.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The findings from the analysis of data for bank profitability and economic growth in Nigeria are summarized in this section from which conclusions are drawn and recommendation made.

5.2 Summary of Findings

The purpose of this study was to ascertain the effect of bank profitability on economic growth in Nigeria. However, in order to achieve the objectives of this study, we utilised four explanatory variables as proxies for bank profitability (credit to private sector, bank loans, bank return on assets and total assets to GDP) while real gross domestic product was used as a proxy for economic growth in Nigeria. The study covered a time period of 1995-2020 (26years).

Based on the empirical analysis carried out in the chapter four of the study, the following findings were arrived at:

Firstly, the study found that there is a positive and insignificant relationship credit

to private sector and economic growth in Nigeria.

Second, the study found that bank loans have a significant effect on economic growth in Nigeria. Third, bank return on assetshave an insignificant effect on economic growth in Nigeria.

Finally, total assets to GDP was found to have a positive and significant effect on economic growth in Nigeria.

5.3 Conclusion

In this study, we have empirically investigated the relationship between bank profitability and economic growth in Nigeria for a period of 26 years (1995 to 2020). The rationale for the present study is predicated on the fact that A well-functioning banking sector should promote adequate fund mobilisation from surplus to deficit units of the economy, reduce information asymmetry, transaction costs, agency and monitoring costs, promote good corporate governance, maximise shareholder wealth, and serve as a major economic driver in both developed and developing nations. Thus, using the ordinary least square (OLS) econometric technique on variables such as real gross domestic product (RGDP), credit to private sector (CTPS), bank loans (BLOANS), bank return on

assets (BROA) and total assets to GDP (ASS/GDP); the empirical results generally indicated that bank profitability have a significant impact on economic growth in Nigeria within the period of investigation. Specifically, it was bank profitability variables such as (bank loans (BLOANS), total assets to GDP (ASS/GDP) and bank return on assets (ROA)) that exert significant impact on economic growth in Nigeria overtime. We conclude that, the government through monetary policy authorities should optimally regulate the banking sector for favourable effect of their operations on Nigerian economic growth.

5.4 Recommendations

In view of the salient findings from this study, the following specific policy recommendations are raised:

First, banks in Nigeria should lend more to the private sector as doing so ensures they are lending to sectors that are likely to generate more income the loans granted which will culminate into a multiplier effect of enhanced economic growth performance in the long run.

Second, the apex monetary authority in Nigeria (CBN) should ensure that banks are regulated to give out more proportion of their income as loans to individuals,

private sector and public sector as doing so would ensure enhanced economic growth performance according to the study's findings.

Third, banks should not leave customers' deposits idle but should invest a large chunk of it on risk-free securities such as government bonds as well other risky securities with the adoption of effect risk management mechanism, this would ensure that these deposits are productive to the banks (in relation to their financial performance) and the economy as a whole.

Finally, efforts should be made by banks to maintain continuous increase in their assets which could be diversifying, opening more branches, among others. Such expansions ensure that banks require more manpower which implies creation of job opportunities which will invariably lead to improved economic growth performance.

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APPENDIX

Covariance Analysis: Ordinary

Date: 01/08/23 Time: 05:06

Sample: 1995 2020

Included observations: 26

Correlation

t-Statistic

Probability	RGDP	CTPS	BLOANS	BDEP	ASSGDP
RGDP	1.000000				

CTPS	0.856030	1.000000			
	8.112699	-----			
	0.0000	-----			
BLOANS	0.831532	0.993845	1.000000		
	7.333623	43.95146	-----		
	0.0000	0.0000	-----		
BDEP	0.869988	0.991320	0.975913	1.000000	
	8.643866	36.93839	21.91484	-----	
	0.0000	0.0000	0.0000	-----	
ASSGDP	0.812537	0.985235	0.975324	0.984890	1.000000
	6.828839	28.19189	21.64215	27.86072	-----
	0.0000	0.0000	0.0000	0.0000	-----

Dependent Variable: RGDP

Method: Least Squares

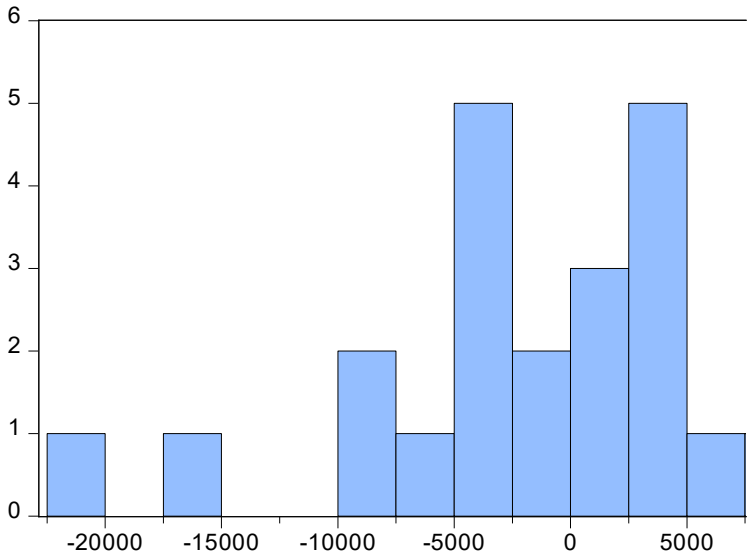
Date: 01/08/23 Time: 05:06

Sample: 1995 2020

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CTPS	0.005833	0.005451	1.070205	0.2967
BLOANS	3.484161	3.908746	2.891376	0.0088
BDEP	11.40048	7.130642	1.598802	0.1248
ASSGDP	166576.8	58773.67	2.834208	0.0099
C	27708.74	3909.265	7.087967	0.0000

R-squared	0.831790	Mean dependent var	40347.57
Adjusted R-squared	0.799751	S.D. dependent var	20095.35
S.E. of regression	8992.517	Akaike info criterion	21.21721
Sum squared resid	1.70E+09	Schwarz criterion	21.45916
Log likelihood	-270.8238	Hannan-Quinn criter.	21.28688
F-statistic	25.96107	Durbin-Watson stat	1.441797
Prob(F-statistic)	0.000000		



Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.767915	Prob. F(2,19)	0.1976
Obs*R-squared	4.079352	Prob. Chi-Square(2)	0.1301

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 01/08/23 Time: 05:07

Sample: 1995 2020

Included observations: 26

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CTPS	0.001571	0.005575	0.281810	0.7811
BLOANS	-1.346224	4.004467	-0.336181	0.7404
BDEP	-0.565064	6.966553	-0.081111	0.9362
ASSGDP	-1100.301	57001.97	-0.019303	0.9848
C	-856.6448	3810.601	-0.224806	0.8245
RESID(-1)	0.176075	0.242380	0.726440	0.4764

RESID(-2)	-0.531147	0.337962	-1.571621	0.1325

R-squared	0.156898	Mean dependent var	-7.28E-12
Adjusted R-squared	-0.109345	S.D. dependent var	8241.778
S.E. of regression	8680.688	Akaike info criterion	21.20039
Sum squared resid	1.43E+09	Schwarz criterion	21.53911
Log likelihood	-268.6051	Hannan-Quinn criter.	21.29793
F-statistic	0.589305	Durbin-Watson stat	1.951266
Prob(F-statistic)	0.734862		

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	4.861243	Prob. F(4,21)	0.0062
Obs*R-squared	12.50018	Prob. Chi-Square(4)	0.0140
Scaled explained SS	8.736160	Prob. Chi-Square(4)	0.0680

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/08/23 Time: 05:08
Sample: 1995 2020
Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-40980576	33323300	-1.229787	0.2324
CTPS	-4.314112	46.46354	-0.092849	0.9269
BLOANS	12004.55	33318.87	0.360293	0.7222
BDEP	-102423.3	60782.91	-1.685067	0.1068
ASSGDP	1.45E+09	5.01E+08	2.900439	0.0086

R-squared	0.480776	Mean dependent var	65314327
Adjusted R-squared	0.381876	S.D. dependent var	97498155
S.E. of regression	76653877	Akaike info criterion	39.31854
Sum squared resid	1.23E+17	Schwarz criterion	39.56048

Log likelihood	-506.1410	Hannan-Quinn criter.	39.38821
F-statistic	4.861243	Durbin-Watson stat	1.267819
Prob(F-statistic)	0.006207		

Ramsey RESET Test

Equation: UNTITLED

Specification: RGDP CTPS BLOANS BDEP ASSGDP C

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.671953	20	0.1101
F-statistic	2.795427	(1, 20)	0.1101
Likelihood ratio	3.401520	1	0.0651

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	2.08E+08	1	2.08E+08
Restricted SSR	1.70E+09	21	80865357
Unrestricted SSR	1.49E+09	20	74496191

LR test summary:

	Value
Restricted LogL	-270.8238
Unrestricted LogL	-269.1230

Unrestricted Test Equation:

Dependent Variable: RGDP

Method: Least Squares

Date: 01/08/23 Time: 05:08

Sample: 1995 2020

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CTPS	0.014162	0.007224	1.960452	0.0640

BLOANS	-7.452173	4.439301	-1.678682	0.1088
BDEP	41.42339	19.21686	2.155576	0.0435
ASSGDP	-561391.9	242784.7	-2.312304	0.0315
C	51428.74	14674.79	3.504563	0.0022
FITTED^2	-2.47E-05	1.48E-05	-1.671953	0.1101

R-squared	0.852418	Mean dependent var	40347.57
Adjusted R-squared	0.815523	S.D. dependent var	20095.35
S.E. of regression	8631.118	Akaike info criterion	21.16331
Sum squared resid	1.49E+09	Schwarz criterion	21.45364
Log likelihood	-269.1230	Hannan-Quinn criter.	21.24691
F-statistic	23.10361	Durbin-Watson stat	1.438977
Prob(F-statistic)	0.000000		

YEAR	RGDP	CTPS	BLOANS	BDEP	ASSGDP
1995	21660.49	204,090.60	122.83	79.47	0.01892
1996	22568.87	254,853.10	153.16	95.9	0.02166
1997	23231.12	311,358.40	214.76	128.16	0.02682
1998	23829.76	366,544.10	244.66	142.25	0.0311
1999	23967.59	449,054.30	311.67	202.15	0.04766
2000	23967.59	587,999.90	429.34	345	0.06623
2001	25169.54	844,486.20	714.47	448.02	0.08893
2002	11332.25	948,464.10	805.31	503.87	0.09555
2003	13301.56	1,203,199.00	1,012.37	577.66	0.09612
2004	35020.55	1,519,242.70	1,278.64	728.55	0.10717

2005	17321.3	1,991,146.42	1,584.52	946.64	0.12048
2006	22269.98	2,609,289.40	2,096.27	1,497.90	0.17934
2007	28662.47	4,820,695.70	3,861.54	2,307.92	0.25585
2008	46012.52	7,799,400.11	6,051.68	3,650.64	0.34598
2009	49856.1	9,667,876.68	7,385.76	3,386.53	0.35147
2010	54612.26	9,198,173.06	6,359.62	3,830.28	0.31736
2011	57511.04	9,614,445.80	6,098.51	4,920.85	0.33727
2012	59929.89	10,440,956.33	7,034.05	5,069.99	0.35522
2013	63218.72	11,543,649.93	8,730.63	5,160.85	0.3844
2014	67152.79	13,179,598.11	11,590.97	5,248.87	0.40991
2015	69023.93	13,568,543.70	11,609.33	5,873.45	0.40817
2016	67984.2	16,500,150.26	14,163.54	6,180.04	0.4664
2017	68490.98	16,193,858.35	13,703.01	6,388.65	0.50509
2018	69799.94	15,438,603.87	12,789.07	6,608.65	0.53305
2019	39577.34	17,436,986.42	14,585.06	6,964.26	0.58764
2020	43564.01	17,436,986.42	14,585.06	6,964.26	0.58764