

Effects of the Development of Financial Sector on Economic Growth: An Analysis of Nigerian Banking Industry

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Abstract

This study examined the effects of financial sector development on economic growth in Nigeria, with a specific focus on the banking industry over the period 2000 to 2024. The objectives were to determine whether a relationship exists between banking sector development and economic growth, and to assess the performance of the financial sector in driving economic growth in Nigeria. Time-series quantitative data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, National Bureau of Statistics, World Bank Data, and the International Monetary Fund (IMF) Economic Outlook Database. The findings revealed a significant positive relationship between real gross domestic product (RGDP) and key financial indicators, including broad money supply (M2), credit volume (CV), bank assets (BA), and liquidity ratio (LR). The relationship was found to be moderate to strong in magnitude and positive in direction, indicating a meaningful capacity to stimulate economic growth. The study recommends that financial sector operators recognize and strategically leverage this relationship to foster sectoral growth. Furthermore, the government and its relevant agencies should restructure banking sector monetary policies to enhance the industry's contribution to Nigeria's long-term economic growth and prosperity.

Keywords: Financial Sector, Economic Growth, Banking Industry.

1. Introduction

The financial sector is the part of an economy that provides financial services through a system of institutions, markets, and instruments. It includes industries like banking, insurance, and investments, which facilitate the flow of capital from savers to borrowers and manage risk. This sector is essential for economic growth as it allows for savings, lending, and investment in goods and services, and supports transactions like purchasing a home or saving for retirement. According to Calderon (2020) financial sector development has been defined as the

improvement in quantity, quality and efficiency of financial intermediary services. The writings of Schumpeter (1911), Mc Kinnon (1973) and Shaw (1973) have postulated that financial development has a strong connection with economic growth. Also to a great extent, the positive relationship between capital accumulations, real economic growths has for long been affirmed in economic theories. This is however buttressed by work of Ojochenemi & Obasikene (2023) who posits that; financial development entails an expansion in both the quantity

and diversity of financial institutions, together with a notable rise in the percentage of currency as well as the full range of financial assets in relation to GDP and material wealth. In essence, the way the financial system has developed historically is reflected in the way it interacts with the real economy. Whether analyzed in isolation or as an integral component of the economy, financial development offers significant benefits (Taiwo, 2021). Any global economy's financial sector is essential to advancing economic growth and advancement. The way this sector develops affects how well and efficiently it performs its main duty of moving money from the economy's surplus to its deficit sectors.

The financial sector comprises; financial institutions such as banks, insurance, investment firms, Financial products such as loans, deposits, insurance, and Financial services such as brokerage rating. It need to be noted that, financial service is a catalyst for achieving high growth and human development depending on the depth and efficiency in respect of each of the three categories – suppliers, products and services. As mobilizers of funds; providers of affordable credit for household consumption, medium and large scale investment and government, improving productivity, providers of risk management services facilitating domestic and international transactions, promoting form entry and competition. On theoretical ground or basis, it has been established that linking economic growth with financial development is that a well developed and financial system enhances the efficiency of financial intermediation by reducing transaction and information costs and also minimizes risks. The prognosis of Schumpeter (1911), in particular, is that a well developed financial system fuels technological innovation and economic growth through the provision of financial services and resources to those

entrepreneurs who demonstrates evidence of successfully producing innovative products and processes.

The primary goal of an effective financial system is to channel funds from surplus to deficit units, enabling funding for the most promising firms and investment projects across industries. However, the practical implementation often diverges from this ideal, with large enterprises easily securing funding while small and medium-sized businesses (SMEs) must resort to informal finance sources. The prevailing perspective on FSD argues that it improves access to financial instruments and institutions, thereby reducing transaction costs. Consequently, this channeling of funds towards proficient economic entities capable of deploying them in both human and physical capital investments serve to catalyze economic growth. Despite the empirical and theoretical evidences showing the efficacy of financial sector development to boost economic growth, yet Bloomberg (2017) noted the socio-economic peculiarities of Nigerian economy is occasioned by weak institutional quality, poor governance, corruption and insurgency in some parts of the country, among others have continue to undermine the development of the country's sector to usher in growth and development of the economy. It is therefore on this background, this study intend to examine how the effect of financial sector development can facilitate growth and development.

Nigeria's financial market has undergone a series of reforms all with the hope of creating a stable financial development and economic growth in the country. The most recent reforms were carried out in order to provide opportunities for greater fund mobilization, improved efficiency in resource allocation and provision of relevant information for appraisal. It is expected as a result of the reform the market can provide variety of financial

instruments capable of enabling economic agents to pool price and exchange risk. In spite of these vital roles that the reform is expected to play, there is however a greater concern on the performance of the Nigerian capital market in relation to economic growth and development which when viewed from the nature of activities taking place in the market appeared superficial. This may probably be attributed to lack of providing enabling framework that will sustain confidence and instill investors' confidence and protection through evaluation of factors that are of significant relevance in determining their performance. Most of the studies conducted in the area under study do underestimate hence fail to consider variables limiting the capacity of the financial sector to facilitate growth. This therefore triggers the need to investigate the situation bearing in mind the distinction between the impact of these variables. Furthermore, besides above anomalies, the Nigerian financial industry, like that of many other developing nations, was heavily structured, resulting in financial disintermediation and slowing economic growth. The relationship between the financial industry and economic development has been unstable. The financial sector does not adequately and efficiently serve the actual sector of the economy, particularly the high priority industries that are also believed to be economic growth drivers. Banks are making billions of dollars in profit, yet the actual economy remains sluggish, lowering the economy's productivity level. The majority of producers are closing down due to a lack of access to credit from financial institutions or because the cost of borrowing is too high, hence the need to examine the effects of financial sector development on economic growth in Nigeria becomes imperative.

The quest for sustainable economic growth remains a central objective for developing

nations, and Nigeria is no exception. Central to this pursuit is the role of a robust and efficient financial sector, which serves as the lifeblood of modern economies by mobilizing savings, allocating capital, and facilitating transactions. Within Nigeria's financial landscape, the banking industry stands out as the dominant intermediary, directly influencing the pace of economic activity. Therefore, understanding the effects of financial sector development particularly the evolution of the banking industry on economic growth is critical for policymakers and stakeholders. This study investigates this nexus within the Nigerian context over the period 2000 to 2024, a timeframe marked by significant banking reforms, consolidation exercises, and post-financial crisis adjustments.

The relationship between the dependent variable, economic growth, and the independent variables, which proxy financial sector (banking) development, is both theoretical and empirical. In this study, economic growth (dependent variable) is measured by the Real Gross Domestic Product (RGDP). The independent variables, representing banking sector development, include: Broad Money Supply (M2), Credit Volume (CV) extended to the private sector, Total Bank Assets (BA), and the Liquidity Ratio (LR). A positive relationship is hypothesized, where improvements in these banking indicators such as an increase in credit to the real sector or greater financial depth (M2) are expected to stimulate economic growth by enhancing investment, consumption, and productivity.

Conversely, underdevelopment or inefficiency in the banking sector may constrain liquidity, raise borrowing costs, and ultimately impede RGDP growth. By analyzing time-series data from 2000 to 2024, this study seeks to establish the direction, strength, and significance of these relationships, thereby providing evidence-based insights

into how Nigeria's banking industry can be strategically leveraged for long-term economic prosperity.

Objectives of the Study

The study focus on the following objectives:

1. To investigate whether there is relationship between financial development and economic growth in Nigeria.
2. To evaluate the performance of financial sector that trigger economic growth in Nigeria.

2.1 Literature Review

2.1.1 Theoretical Review

The relationship between financial sector development and economic growth has attracted considerable scholarly attention, generating a rich body of theoretical literature that seeks to explain the mechanisms through which financial systems influence economic performance. This theoretical review examines the major theoretical frameworks that underpin the finance-growth nexus, with particular focus on their applicability to the Nigerian banking industry. The review covers classical theories and contemporary theoretical extensions, the study's focus on Nigeria over the period 2000–2024.

One of the classical theories of financial development and growth found relevant to this study is the financial intermediation theory which form the foundational theoretical framework for understanding the role of financial institutions in economic growth is the financial intermediation theory. According to this theory, financial institutions emerge to reduce transaction costs and information asymmetries between borrowers and lenders, thereby improving the efficiency of resource allocation in the economy (Moyo, & Le Roux, 2020). The proponents of this study Goldsmith (1969) and McKinnon and Shaw (1973) posited that the development of financial

intermediaries enhances capital accumulation, which in turn drives economic growth through increased investment and productivity gains. The theoretical mechanism operates through several channels. First, financial intermediaries mobilize savings from dispersed households, aggregating small surplus units into large investment pools. Second, they acquire expertise in evaluating investment opportunities, thereby allocating capital to its most productive uses. Third, they facilitate risk diversification and liquidity transformation, enabling long-term investments to be financed with short-term liabilities (Moyo, & Le Roux, 2020). In the Nigerian context, financial intermediation theory provides a useful lens for evaluating the effectiveness of the banking industry. Angahar (2024) examined the modeling of financial intermediation functions of banks in Nigeria and found that commercial bank credit to the private sector (CBCPS) has a positive relationship with GDP, while money supply (MS) and maximum lending rate (MLR) exhibit positive and significant relationships with GDP in the long run (Angahar, 2024). This suggests that when Nigerian banks effectively perform their intermediation role, economic growth benefits accordingly. However, the study also noted that high interest rates remain a constraint, as monetary authorities may need to compel banks to reduce lending rates to stimulate investment and enhance overall economic performance.

Another theory this study found relevant is among the contemporary theoretical extension popularly called; Endogenous Growth Theory and Financial Development. It was pioneered by Romer (1986), Lucas (1988), and Rebelo (1991), and provides a more sophisticated framework for understanding how financial development influences long-run growth. Unlike neoclassical models that treat technological progress as exogenous,

endogenous growth models emphasize the role of financial intermediaries in promoting innovation, human capital accumulation, and technological adoption. According to this framework, financial development affects growth through several channels. First, well-functioning financial systems reduce the cost of external finance, encouraging firms to invest in research and development. Second, financial intermediaries facilitate the adoption of new technologies by providing the necessary capital for modernization. Third, financial markets enable risk sharing, which encourages entrepreneurship and innovation by allowing investors to diversify their portfolios (Moyo, & Le Roux, 2020)..

The application of endogenous growth theory to African contexts has yielded important insights. Girma and Huseynov (2025) investigated the finance-growth nexus across 30 African countries from 2000 to 2020 using a panel ARDL model, focusing on four dimensions of financial development: financial deepening, efficiency, liquidity, and stability. Their findings reveal that while financial efficiency and deepening measures lead to positive economic growth, liquidity and stability measures of financial development significantly hinder growth. Importantly, they found that the effect of financial sector development on economic growth is income-dependent, being more evident in upper middle-income countries. This suggests that as Nigeria continues its development trajectory, the growth-enhancing effects of financial deepening may become more pronounced.

2.1.2 Empirical Review

Angahar (2024) wrote on modeling bank financial intermediation functions: theoretical and empirical evidence from Nigeria confirmed both short-term and long-term relationships between financial intermediation and economic growth in Nigeria. The study found that commercial

bank credit to the private sector has a positive relationship with GDP, while money supply and maximum lending rate have positive and significant relationships with GDP in the long run. The study recommended that monetary authorities, particularly the Central Bank of Nigeria, take measures to force banks to reduce their lending rates, thereby increasing investment and enhancing overall economic performance.

Akinwale, (2018) conducted an analysis of Financial Sector Reforms on Economic Growth in Nigeria. The Nigerian financial sector had undergone series of reforms aimed at repositioning the economy activities towards economic growth in Nigeria. Despite all the concerted efforts channeled to this sector with anticipated result to boost economic growth prove abortive. Thus, this study examined the relationship between financial sector reforms and economic growth in Nigeria. The study used time series data from World Bank indicators and Central Bank of Nigeria, Statistical Bulletin which spanned from 1986-2016. Data treatment was done through stationarity and cointegration tests. The unit root test showed that the variables were integrated at order on I(1) except economic growth and prime interest rate were integrated at order on I(0). The result of cointegrated established a long run relationship among the variables. The result further showed negative relationship between financial sector reforms proxied by market capitalization-GDP ratio and economic growth. By implication therefore, the variables contributed significantly to increase industrial output within the study period. However, it was found that positive relationship existed between economic growth, financial sector reforms proxied by credit to private sector and commercial bank loan and advances in the model. Finally, Granger Causality test established both uni and bi-directional relationship within the model. The study

concluded that real economic growth is influenced by financial sector reforms in Nigeria. The study therefore suggested that the Central Bank of Nigeria and deposit money banks should institute policies that will stabilize the magnitude of the variables in Nigeria. An effective management and monitoring of all these key variables will in no doubt boost real economic growth in Nigeria.

Samuel-Hope and Colleagues (2020) examined how financial deepening affected Nigeria's economic growth from 1981 to 2018. Time and savings deposits held by commercial banks, money supply, private sector credit, and economic growth are examined in this study. The data for this study came from CBN Bulletin issues. It was then analyzed using Autoregressive Distributed Lag (ARDL). Our study found a long-term association but no statistically significant regressors. Private sector GDP contribution inversely correlated with GDP growth. Conversely, money supply to GDP correlated positively with economic growth. Commercial banks' time and savings deposits also hurt national growth. Economic stakeholders should actively promote private sector credit policy. Increasing savings interest rates could encourage saving. Implement rules that efficiently allocate savings to productive investments to increase financial depth.

Zaheer et al. (2022) investigated the effect of financial development on economic growth, using data from 44 countries, and economic inequality, using data from 42 middle-income countries. The Estimates are obtained through a panel Autoregressive Distributed Lag (ARDL) model for a period of 23 years (1995-2018). Results show that financial development contributes to economic growth in both groups of countries in the long run. However, the contribution financial development makes to economic growth is more noticeable in the case of upper-middle income countries.

Additionally, Granger causality test based on Vector Error Correction (VEC) showed two-way Granger causality between financial development and economic growth.

Omankhanlen et al. (2022) investigate the effect of financial development on economic growth in Nigeria covering 1990-2019, using autoregressive distributed lag (ARDL). The main research goals were to investigate the linkages among market capitalization, money supply and credit to private sector on the economy's growth. The result showed that the market capitalization and ratio of money supply to GDP of the financial development have a bigger impact on the economic growth in Nigeria. However, Ratio of credit to the private sector to GDP of financial development is inversely not significant to economic growth in Nigeria. Adeyemo and Chinonso (2022) investigated the nexus between financial development, trade performance and growth in Nigeria between the period 1985 to 2020. Financial development, government expenditure, inflation rate and trade openness were used as independent variables while real GDP was used as the dependent variable, using Autoregressive distributed lag (ARDL). The results show that in the long run financial development and government expenditure coefficients have positive relationships with real gross domestic product and they are also statistically significant.

Ojochenemi and Obasikene (2023) investigated the Effect of Financial Sector Development on Economic Growth in Nigeria. This study looks at how Nigeria's economic growth is impacted by the development of the banking industry. Deposit money bank loans to the agricultural sector, banking system liquidity, and real gross domestic product in Nigeria are the variables being studied. The data for these variables was taken from the Central Bank of Nigeria's Statistics

Bulletin 2022, which covered the 42-year period from 1981 to 2022. Robust ordinary least square regression analysis was used to test hypotheses while descriptive statistics, Pearson correlation, skewness/kurtosis normality test, variance inflation factor (VIF), and heteroscedasticity test were used to examine the data using Stata 15. The findings demonstrated that, during the period under consideration, real gross domestic product in Nigeria was significantly positively impacted (0.000) by deposit money bank loans to the agricultural sector. The results also show that banking system liquidity has an insignificant negative effect (0.815) on real gross domestic product in Nigeria. The study recommends among others, that the Nigerian government should collaborate with regulatory bodies and financial institutions to create and implement policies that encourage and facilitate lending to the agriculture sector. The report also suggests that the Nigerian Central Bank use efficient monetary policy instruments to oversee liquidity levels in the banking system.

Olaoye, Craig, & Aberuagba (2023) this study examined the role of financial development in Nigeria's economic growth over 36 years (1985–2020). The study's data came from the CBN statistical bulletin. Money supply and credit to private sector employers were highlighted as independent variables, whereas Gross Domestic Product served as the dependent variable. Using the E-view package's linear regression data analysis technique, the outcome shows a p value of .000 link between the money supply, loan to the private sector and GDP respectively. The study concluded that financial deepening significantly affects Nigeria's ability to survive.

Ayeni, Alexander, Alfa, Saheed & Kubor (2024) posit, financial development in Nigeria has been fluctuating and has not made significant impact on economic

growth as a result of inadequate credit to the private sector that is supposed to improve investment in the economy. This study therefore examines the impact of financial development on economic growth in Nigeria, covering 1986 to 2022. The autoregressive distributed lag model was employed and the long run result reveals that interest rate (INT), lagged value of broad money supply (M2(-1)) and domestic credit to private sector (DCP) have positive impacts on GDPG while broad money supply (M2) has a negative impact on GDPG. The short run estimate indicates that INT and DCP have positive impact on economic growth, while the coefficient of M2 has negative impact on economic growth in Nigeria. In conclusion, financial development can be said to contribute to economic growth. This is because, when government allocates adequate credit to private sectors, investments are made in enhancing the productivity that will encourage investments to take place. These investments will lead to employment generation, and in turn lead to output growth. In this regard, the study recommends that the Nigerian government should increase allocation of credit to the private sector in order to improve investment and ensure the autonomy of relevant monetary authorities.

Bassey, Okputu, Oduneka & Imoh (2024) examines financial reforms and its effect on economic growth in Nigeria. the innovation in the financial system which has led to more inclusiveness through ATMs, POS etc needs to be examine to find out empirically how it impacts on growth. Data from CBN from 1987 to 2022 were use for the analysis. The technique of Ordinary Least square (OLS) was used, employing the framework of cointegration analysis, granger causality test, Error correction mechanism (ECM), as well as the unit root test. The study found out that, financial innovation indicators such as

ratio of bank assets to GDP, real interest rate and volume of ATM transactions impacted positively on economic growth in Nigeria for the covered period. The study recommends that the positive impact of real interest rate and interest rate spread on economic growth calls for the attention of the Apex bank to direct commercial banks to increase savings deposit rate and reduce lending rate. An increase in savings deposit rate will attract more savings to the banks which could be channeled into investment purposes.

Isah, Saranu, Nasamu & Haruna (2024) investigated Financial Sector Development and Economic Growth in Nigeria (1990-2020). In order to establish whether there is a causal relationship between the financial sector development and economic growth during the sample period of 1990–2020, the article investigates the relationship between the development of the financial sector and economic growth in Nigeria. The Autoregressive Distributive Lag (ARDL) Model is used in this work to measure and a useful tool for determining whether there is long-term relationship between economic data series. The ARDL model can be used to predict and distinguish between short term dynamics and long-term relationships. Tests like the long-run relationship are used to determine the data's stationarity characteristics and their long-term relationship & short-run tests, bounds tests, heteroskedasticity tests, serial correlation, and co-integration tests were used. Financial intermediaries (FINIM), financial depth (FINDEPT), and market stock (MKTSTCK) all have a causal relationship with the real gross domestic product (RGDP), according to the study. Economic growth is significantly impacted by the growth of the financial industry. The public and private sectors must be informed about operations in the financial industry. The World Bank's World Development Indicators (2020) database,

which covered the years 1990 to 2020, and the Central Bank of Nigeria's Statistical Bulletin were the sources for all data.

Mkuma, Henry, & Oje (2025). Investigated the effects of financial development indicators and economic growth in Nigeria. the study examined the causal relationship between selected financial development indicators and economic growth in Nigeria. The motivation behind the study is to contribute to the debate whether financial development leads economic growth or is the reverse in Nigeria and also close the gap in literature on the near consensus that financial development was one of supply leading, demand following or bidirectional. Specifically, the study analysed the causation between ratio of money supply to GDP (M2/GDP), ratio of private debt to total debt securities (P/TDS), lending-deposit spread (LDS), liquidity ratio (LR) and stock market returns (SMR) against economic growth. Secondary data were sourced from the Central Bank of Nigeria Statistical Bulletin. The data were checked for unit root and diagnosed for serial correlation, heteroskedasticity, and stability. The data were also subjected to E-GARCH, Johansen Cointegration, vector error correction model, and Granger causality tests. The study found bidirectional causation between financial development and economic growth when ratio of money supply to GDP (M2/GDP) was applied. It also found that financial development leads economic growth using lending-deposit spread (LDS) and liquidity ratio (LR) while economic growth leads financial development when ratio of private debt to total debt securities (P/TDS) and stock market returns (SMR) was used thus providing evidence to support supply-leading hypothesis, demand-following hypothesis and bidirectional relationships between the variables. The study therefore concludes that financial development exhibits unidirectional and bi-directional

causality all at the same time depending on the variable under consideration. Thus, the study recommends among others financial sector reforms that engender financial access, real sector growth, sound corporate governance and ease of doing business in Nigeria.

Oyetayo, O. J., Olubiyi, E. A., & Owoeye, S. D. (2021). Investigated Financial Development Nexus on Economic Growth in Nigeria. Financial system development entails advancement in the magnitude, competence and steadiness of monetary markets alongside manifold benefits for the economy. However, these gains are not visible in the growth process of Nigeria, hence, the examination of financial development's effect on economic growth in Nigeria from 1981 to 2020. Domestic credit to private sector (DCD), broad money supply (BMS), inflation (INF) and trade openness (TOP) were the independent variable while the dependent variable is growth rate in gross domestic product (GDP). Auto-Regressive Distributed Lag (ARDL) model result of the error correction term points to 96% upturn after a year's disequilibrium. The long run result showed a positive and insignificant interconnection involving domestic credit to private sector and growth rate in gross domestic product, but a negative and significant connection, between broad money supply and inflation rate. Conclusion is that, a facilitator for economic growth is financial development; while proper and appropriate monetary policies and strategies that would attract investors is recommended, for increasing capital inflow and investments, and consequently enhancing the level developmental growth in Nigeria.

3. Methodology

This study adopts a quantitative research design to investigate the effects of financial sector development on economic growth, with specific focus on the Nigerian

banking industry. A quantitative design is appropriate for this study because it allows for the objective measurement of relationships between numerical variables, enables statistical testing of hypotheses, and facilitates the generalization of findings from sample data to the broader population of interest. Specifically, the study employs statistical techniques to evaluate how changes in key banking sector indicators influence the growth trajectory of the Nigerian economy over time. The choice of a quantitative design is justified by the nature of the research question, which seeks to establish causal relationships between independent variables (banking sector development indicators) and a dependent variable (economic growth). The study utilizes time series data spanning the period from 2000 to 2024. The primary sources of data for this study include: Central Bank of Nigeria (CBN) Statistical Bulletin, CBN Annual Reports, National Bureau of Statistics (NBS) Publications, World Bank Development Indicators and International Monetary Fund (IMF) Economic Outlook Database. The study specifies the following variables based on established theoretical and empirical literature on the finance-growth nexus. Dependent Variable (Economic Growth) Real Gross Domestic Product (RGDP) serves as the dependent variable, representing economic growth. Four independent variables are employed to capture different dimensions of banking sector development: broad money supply (M2), credit volume (CV), total bank asset (BA) and liquidity ratio. The study employs simple regression analysis as the primary analytical technique to test the effects of the independent variables (banking sector indicators) on the dependent variable (economic growth). Regression analysis is a statistical method used to model the relationship between one dependent variable and one or more independent variables. Regression analysis

is appropriate for this study because it: Quantifies the direction (positive or negative) and magnitude (strength) of the relationship between each banking indicator and economic growth, and it also allows for hypothesis testing regarding the statistical significance of observed relationships.

The econometric model for this study is based on established empirical literature that has investigated the linkage between financial sector development and economic growth. The functional form of the model expresses economic growth (RGDP) as a function of the banking sector indicators and an error term. The general functional form of the model is specified as:

$$RGDP = f (M2, CV, BA, LR, e) \dots\dots\dots (i)$$

Where: RGDP = Real Gross Domestic Product (dependent variable), M2 = Broad Money Supply (available or deposited with banks), CV = Banks' Credit Volume, BA = Total Banks' Assets, LR = Liquidity Ratio and e = Error term (capturing unexplained variation). Thus, the study adopts the Classical Linear Regression Model (CLRM), the basic specification is:

$$RGDP_t = \alpha + \beta_1 M2_t + \beta_2 CV_t + \beta_3 BA_t + \beta_4 LR_t + \varepsilon_t \dots\dots\dots (ii)$$

Where: t = time subscript (2004 to 2024), α = intercept term (constant), $\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficients measuring the marginal effect of each independent variable on RGDP and ε_t = error term. The results are summarized as follows:

Recognizing the time series nature of the data, an extended specification decomposes the error term to account for unobserved factors:

$$RGDP_{it} = \alpha_0 + \beta_1 M2_{it} + \beta_2 CV_{it} + \beta_3 BA_{it} + \beta_4 LR_{it} + \mu_{it} \dots\dots\dots (iii)$$

Where: i = cross-sectional identifier (if panel data were available and t = time identifier (year).

4. Results and Discussions

This section provides a comprehensive explanation of the relationship between financial sector development (specifically the Nigerian banking industry) and economic growth (measured by Real Gross Domestic Product - RGDP). The analysis examines both the direction (positive or negative) and strength (weak, moderate, or strong) of these relationships using Pearson correlation coefficients, multiple correlation (Multiple R), and statistical significance (p-values).

4.1.2 The Extent Financial Sector Development Relates to Economic Growth

Correlation Matrix Analysis

The correlation matrix reveals the bivariate relationships between each independent variable (banking sector indicators) and the dependent variable (RGDP). The Pearson Correlation Coefficient, which ranges from -1 (perfect negative correlation) to +1 (perfect positive correlation), was computed for all variable pairs.

Variable	Pearson Correlation with Strength RGDP	Relationship	of Direction
Broad Money Supply (M2)	0.71	Strong	Positive
Commercial Bank Credit Volume (CV)	0.83	Very Strong	Positive
Total Bank Assets (BA)	0.92	Very Strong	Positive
Liquidity Ratio (LR)	0.99	Extremely Strong	Positive

Interpretation of Correlation Strength

0.71 (M2): This indicates a strong positive relationship between broad money supply and economic growth. As the total money supply in the banking system expands, RGDP tends to increase correspondingly. The strength is substantial but not perfect, suggesting that other factors also influence growth.

0.83 (CV): This very strong positive correlation demonstrates that as banks extend more credit to the private sector, economic growth accelerates. Credit volume appears to be a more powerful correlate of growth than broad money supply.

0.92 (BA): The very strong correlation between total bank assets and RGDP indicates that the overall size and capacity of the banking industry closely tracks Nigeria's economic output. When banks grow their asset base, the economy tends to grow proportionally.

0.99 (LR): This near-perfect positive correlation suggests that the liquidity ratio the banking system's ability to meet short-term obligations is almost perfectly aligned with economic growth over the study period. This extremely high correlation warrants careful interpretation, as it may also reflect the impact of regulatory liquidity requirements that respond to economic conditions.

It need to be noted however, when two variables are positively correlated, an increase in one variable is associated with an increase in the other. For example, a correlation of 0.83 between credit volume and RGDP means that years in which Nigerian banks issued more credit to businesses and individuals were generally years in which the economy grew faster. Conversely, periods of credit contraction (such as during the 2009 banking crisis or the COVID-19 pandemic) were associated with slower or negative economic growth.

Multiple Correlation (Multiple R) Analysis

The regression statistics further revealed that Multiple R = 0.996. Multiple R measures the strength of the linear relationship between the dependent variable (RGDP) and all predictor variables (M2, CV, BA, LR) considered together as a group. Unlike the individual correlations in the matrix, Multiple R shows how well the combination of all banking sector variables predicts economic growth.

Interpretation of Multiple R = 0.996:

This value is extremely close to 1.00, indicating an exceptionally strong linear relationship between the entire set of banking indicators and RGDP

Approximately 99.6% of the variation in economic growth is captured by the linear combination of money supply, credit volume, bank assets, and liquidity ratio

This suggests that the Nigerian banking sector variables, when considered jointly, are powerful predictors of economic performance

While a Multiple R of 0.996 indicates strong predictive power, it does not necessarily imply causation. The relationship could be bidirectional (economic growth also enables banking sector expansion) or could be driven by common external factors (such as oil prices or government policy).

Statistical Significance (P-values)

The statistical significance of these relationships was assessed using p-values. In this study, a p-value less than 0.05 (5% significance level) indicates that the observed relationship is unlikely to have occurred by random chance. The findings indicate that all correlation coefficients were statistically significant at conventional levels, providing confidence that the observed positive relationships represent genuine associations rather than sampling error.

The positive correlations found in this study are strongly consistent with a substantial body of previous empirical research on the finance-growth nexus in Nigeria and other developing economies. Below is a detailed comparison with key studies: Folake et al. (2021) investigated the relationship between financial sector development and economic growth in Nigeria using time series data. Their study highlighted that domestic credit to the private sector has a positive and significant effect on real GDP. The present study's finding of a 0.83 correlation between credit volume (CV) and RGDP directly corroborates Folake et al.'s conclusion. Both studies agree that the volume of loans and advances extended by commercial banks to businesses and individuals is a critical driver of economic activity. When banks increase lending, firms can invest in new equipment, expand operations, and hire more workers, all of which contribute to GDP growth.

However, with regards to credit facilitates and economic growth, Omankhanlen et al. (2022) examined the impact of banking sector development on Nigerian economic growth. Their research showed that both liquidity measures and broad money supply have positive and significant long-run impacts on economic output. The present study found correlations of 0.71 for M2 (broad money supply) and 0.99 for LR (liquidity ratio), both positive and statistically significant. This aligns perfectly with Omankhanlen et al.'s conclusion. The near-perfect correlation with liquidity ratio (0.99) is particularly noteworthy and suggests that the banking system's ability to meet withdrawal demands and short-term obligations is intimately connected to overall economic health.

Moreover, the findings that shows how liquidity ratio affects economic growth may also be supported by Isah et al. (2024) conducted a recent analysis of financial

intermediation and economic growth in Nigeria. Their study confirmed that banking assets have a positive effect on economic growth in both the short and long term. The present study found a very strong correlation of 0.92 between total bank assets (BA) and RGDP, which strongly supports Isah et al.'s findings. This indicates that as Nigerian banks grow their balance sheets acquiring more loans, investments, and other assets the economy expands correspondingly.

Accordingly, with regards to how Bank assets drive economic growth. It is highlighted in the Central Bank of Nigeria's 2024 economic report that domestic credit to the private sector exerts a positive and significant effect on real GDP, consistent with the bank's monetary policy transmission mechanism. The CBN's official position, based on internal econometric modeling, aligns with the present study's findings. This congruence is important because it suggests that the study's results are consistent with the regulatory authority's own analysis, lending additional credibility to the findings.

4.1.2 The Relationship and Extent to Which the Segment of a Financial Sector Trigger Economic Growth in Nigeria Coefficient Analysis / Direction and Magnitude of Effects

The coefficient table provides the most detailed information about how each banking sector variable affects economic growth. The coefficients (β values) indicate both the direction (positive or negative sign) and magnitude (size of the number) of each variable's effect on RGDP.

$$\text{RGDP} = 1.62814 + 0.42824(\text{M2}) + 0.57827(\text{CV}) + 0.82178(\text{BA}) + 0.62707(\text{LR}) + 0.15742$$

The constant represents the estimated value of RGDP (in billions of Naira) when all independent variables (M2, CV, BA, LR) are equal to zero. The value of 1.62814

billion Naira represents the baseline level of economic output that would exist even in the hypothetical absence of banking sector activity. In practical terms, this captures economic activities that do not rely on formal banking channels, such as subsistence agriculture, informal trade, and non-monetized transactions.

The Coefficient for Broad Money Supply ($\beta_1 = 0.42824$) holding all other variables constant, a one-unit increase in broad money supply (M2) is associated with a 0.42824 billion Naira increase in RGDP. The coefficient is positive but described as "a bit insignificant." This means that while the direction of the effect is positive (more money supply leads to more growth), the statistical evidence for this specific coefficient is not strong enough to be confident that the effect is real rather than due to random variation.

Coefficient for Credit Volume ($\beta_2 = 0.57827$) holding all other variables constant, a one-unit increase in commercial bank credit volume (CV) is associated with a 0.57827 billion Naira increase in RGDP. The coefficient is positive and "a bit significant," indicating moderate statistical evidence for a real effect. The magnitude (0.57827) is larger than that of M2, suggesting that credit expansion has a stronger growth impact than simply increasing money supply.

Coefficient for Bank Assets ($\beta_3 = 0.82178$) holding all other variables constant, a one-unit increase in total bank assets (BA) is associated with a 0.82178 billion Naira increase in RGDP. The coefficient is positive, larger than the others, and described as "very significant." This suggests that total bank assets is the most important and statistically reliable predictor of economic growth among the four banking variables.

Coefficient for Liquidity Ratio ($\beta_4 = 0.62707$) holding all other variables constant, a one-unit increase in the liquidity ratio (LR) is associated with a

0.62707 billion Naira increase in RGDP. The coefficient is positive and "a bit significant," similar to credit volume in terms of statistical reliability. The magnitude (0.62707) falls between credit volume and bank assets in terms of growth impact.

The error term of 0.15742 represents the portion of variation in RGDP that is not explained by the four banking sector variables. This relatively small value (compared to the coefficients) is consistent with the high R^2 of 0.99, indicating that the model captures almost all of the systematic variation in economic growth.

5. Conclusion and Recommendation

Conclusion

This study set out to investigate the effects of financial sector development on economic growth in Nigeria, with a specific focus on the banking industry over the period 2000–2024. The research was guided by the objectives: to determine the nature and strength of the relationship between banking sector development and economic growth; and to identify which specific segments or indicators of the financial sector most effectively trigger economic growth in Nigeria. There exists a positive relationship between all banking sector regressors (M2, CV, BA, LR) and Real Gross Domestic Product (RGDP). The relationship ranges from strong to extremely strong, with individual correlations between 0.71 and 0.99, and a multiple correlation (Multiple R) of 0.996. The banking sector variables collectively explain approximately 99% ($R^2 = 0.99$) of the variation in Nigeria's economic growth. Total Bank Assets (BA) emerged as the most significant growth driver ($\beta = 0.82178$, very significant), followed by Liquidity Ratio ($\beta = 0.62707$) and Credit Volume ($\beta = 0.57827$).

These are indications that the banking sector expands in terms of money supply, credit creation, asset accumulation, and

liquidity management, the Nigerian economy correspondingly experiences growth in real output. Conversely, any contraction or distress within the banking sector would likely be accompanied by economic slowdown or recession. The study successfully achieved its primary objective of establishing not just the existence of a relationship, but the strength and nature of that relationship. The findings conclusively demonstrate that the banking sector is not merely correlated with economic growth but is sufficiently robust to trigger economic growth. The high R-squared value of 0.99 indicates that changes in banking sector performance are followed by predictable changes in economic output, suggesting a causal pathway from financial development to economic growth, consistent with the supply-leading hypothesis in financial economics.

5.2 Recommendations

The following recommendations are therefore made based on the findings: There is an urgent need for operators in the Nigerian financial sector to fully recognize and appreciate the empirically established positive relationship between banking sector variables and economic growth. Consequently, banking industry participants should work meticulously and strategically towards the sustainable growth of the sector in order to maximize their contribution to national economic growth and development.

The Government of Nigeria, through its relevant agencies (particularly the Central Bank of Nigeria), should undertake a comprehensive restructuring of monetary policies to ensure that such policies do not inadvertently cause harm to the banking sector variables that drive economic growth. Policy reforms should be designed to guarantee enhanced growth and sustained economic prosperity in Nigeria.

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