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FINANCIAL SECTOR DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA

By

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ABSTRACT

This study analysed the impact of financial sector development on economic growth in Nigeria. It applied descriptive statistics, Augmented Dickey Fuller (ADF) and ARDL on time series data sourced from Central Bank of Nigeria Statistical Bulletin and World Bank Development Indicator for the period of 1990-2024. It revealed that the data were normally distributed based on Jargue Bera statistics and its p-value whereas the unit root test result indicated mixed order of integration which necessitated the choice of ARDL. In addition, the F-Bounds test for the Autoregressive Distributed Lag (ARDL) model shows that the variables exhibit cointegration with one another and it was confirmed that long run relationship exist among the variables. Moreover, the Error Correction Mechanism (ECM) is represented by the speed of adjustment in ARDL modelling from short-run to long-run convergence. This coefficient of -0.707680 implied that in 1 year 5 Months the divergence among the variables studied will converge back to equilibrium point. On the part of long-run, this study revealed that financial sector development, market capitalization, credit to private sector and bank deposit ratio have positive impact on economic growth in Nigeria and they are statistically insignificant in this analysis except financial sector development and credit to private sector were statistically significant both short-run and long-run. However, interest rate has negative impact on economic growth and statistical significant in the model. The model successfully passed all of the tests for normality, serial correlation, heteroscedasticity, Ramsey RESET test and model stability as revealed in diagnostic tests. This study concluded that the financial sector development has positive impact on economic growth in Nigeria statistically significant in the short and long-run. Therefore, this study recommended that monetary authority should formulate financial inclusive policy to embrace more people into the financial net of the economy, provide avenue that will increase credit facilities to private sector in Nigeria for aggregate investment, create awareness on opportunity exiting in the stock market for high yield of market capitalization, encourage deposits for investment in the economy and Central Bank of Nigeria should reduce the monetary policy rate which can minimize the negative impact of interest rate on economic growth in Nigeria.

Keywords: Financial Sector Development, Economic Growth, Nigeria, Banking Sector

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1.0 INTRODUCTION

Financial sector development is one of the key sectors that is essential for the transformation and advancement of the economy of a country. In fact, development of the financial sector is a complex concept that constitutes a potentially important mechanism for long run economic growth. According to Imoagwu and Ezeanyeji, (2019), development in the financial sector refers to the rise in the availability, efficiency, and quality of services provided by financial intermediaries. This process involves the interconnections of a wide variety of activities and organizations and is likely linked to the expansion of the economy. Also, financial system functioning at its peak is considered to be one of the main pillars on which sustainable economic growth can be established in its effectiveness and efficiency particularly the intermediation between the deficit and surplus units of the economy.

In the words of Nwolisa and Cyril, (2019), financial sector development also has to do with increasing number of available financial services and the variety of these services. It is the process of developing and increasing the number of institutions, instruments and markets that support massive investments and growth that help to reduce poverty. In addition, Increasing ace| levels of complex productivity in the industry. This is accomplished by introducing systemic transformation to the economy as a whole through inventiveness and welfare benefit.

Several facts lend credence to the idea that studying the impact of Nigeria's expanding financial sector on the country's economic growth is a vital and necessary study which enable the economy transform and revolve well.

One of the primary goals of economic policy is to foster growth in the financial sector, but previous research on the effects of various forms of credit on Nigeria's economy has had some limitations, such as focusing solely on financial innovations while ignoring financial markets and institutions. Also, previous studies focused more on private sector credit not taking into consideration, public sector. Similarly, the time frame is considered as a limitation too. A lot of research work has been dedicated to explaining how this goal can be achieved; yet such concerted efforts in both researches and policies do not seem to have yielded meaningful results.

This research work is anchored on the need to fill the knowledge gap caused by the paucity of literature on this topic, especially as it concerns emerging economies like Nigeria. Could one attribute this to the various parametric and non-parametric estimation techniques utilized in the study and the proxies for financial sector development, knowing full well that these estimation techniques do not have high predicting power and is not compatible with small sample size? As such, there is a gap in knowledge and in literature that needs to be bridged. To reevaluate the connection between financial sector growth and GDP expansion in Nigeria, the Autoregressive Distributive Lag (ARDL) model is used in this study.

1.3 Research Objectives

The main objective of this study is to analyze the effect of financial sector development on economic growth in Nigeria. While the specific objectives of the study are to:

i evaluate the relationship between the ratio of private sector credit to GDP and economic growth in Nigeria

ii examine the impact of the ratio of market capitalization to GDP and economic growth in Nigeria

iii determine the effect of the ratio of Bank deposit liability to GDP and economic growth in Nigeria.

iv assess the impact of interest rate on economic growth in Nigeria.

v examine the impact of financial development index on economic growth in Nigeria.

2.0 LITERATURE REVIEW

2.1 Conceptual

2.1.1 Financial Sector Development

Any functioning economy's central nervous system is the financial sector. It is made up of a large number of financial institutions, including banks, and a large number of financial tools. Nigeria's financial system includes banks, insurance companies, specialty banks, the capital market, financing companies, discount stores, bureau de change, mortgage banks, community banks and development finance institutions (DFIs) (Mordi, 2004). The process of increasing the quantity and quality of financial intermediary services is referred to as "financial development". This process involves a multitude of institutions and activities and has been associated with economic growth. Nouren (2009) asserts that the institutions, policies, and other elements that contribute to the efficiency of financial markets and intermediation are all part of financial development.

A developed financial sector is indicated by improvements in the state's capacity to generate information about possible investments and allocate capital, monitor businesses and enforce corporate governance, trade, diversify and manage risk, mobilize and pool savings, and ease the exchange of goods and services. According to Udeme, Chinelo, and Geogina (2020), the process of increasing the entrance of financial sector (financial markets) assets or securities inside the economy is known as financial sector development. When financial instruments, markets, and intermediaries work together, information, enforcement, and transaction costs are all decreased.

2.1.2 Economic Growth

According to Baye and Jansen (2006), the rate of change in real output is the definition of economic growth. Development illustrates how growth affects society by raising the standard of living, whereas expansion is the process of growing national economies (the macro-economic indicators), particularly the GDP per capita, in an ascending but not necessarily linear direction with favourable effects on the economic-social sector (Haller, 2012). Those factors include: (i) the increase of the nation’s stock of capital, (ii) the entrepreneurial ability of human resources, (iii) the trend rate growth of the productivity of labour and capital, and (iv) technological improvements. Increases in productive capacity lead to increased output, which is what we mean by economic growth (Kolawole, Ijaiya, Sanni, &Aina, 2019).

In this study, Real Gross domestic Product (RGDP) will be used as proxy for economic growth in Nigeria. This is GDP measured at constant price 2014 according to CBN, (2019). It is useful in term of measuring the final monetary value of goods and services produced in Nigeria less the value of inflation and current market charges in the country.

2.2 Theoretical literature Review

Models on economic growth have been viewed by many scholars and yet, there is apparently no consensus as to which strategy will achieve the best results. Some of the existing growth models include the Harold-Domar Theory of growth, Schumpeterian Theory, Maximum

Theory, Two-gap Model, Neo-classical Model of Growth, and the Endogenous Growth Theory.

2.2.1 Patrick's Stages of Development Hypothesis

This theory posits a dynamic relationship between financial development and economic growth that evolves over time. In early stages, the *supply-leading hypothesis* dominates, where financial sector growth spurs economic activities by providing credit and mobilizing savings. As the economy matures, the *demand-following hypothesis* becomes more prominent, with economic growth driving demand for financial services. This bi-directional causality highlights the interdependence of finance and growth (Patrick, 1966; Alenoghena et al., 2020).

More to that, Walter Bagehot (1873), Joseph Schumpeter (1911), and Hicks (1969) in their theories examined the effect of financial development on the economic growth. Schumpeter (1911) viewed finance growth relationship on the aspect of supply-leading in which he explained that the financial sector leads to economic growth by successfully identifying and funding high yielding projects. This was based on the view that a financial system that is functioning well would encourage technological innovation by selecting and financing businesses that are expected to be successful. While on the other hand, Bagehot (1873) and Hicks (1969) argued that financial development was an important channel in the industrialization of England, by helping the movement of large amounts of funds for "immense" works.

Contrary to the supply-leading hypothesis, the demand-following hypothesis suggests that economic growth creates demand for financial services, leading to the development of the financial sector. As economies expand, increased economic activities necessitate more sophisticated financial institutions and markets to support transactions, credit, and risk management. Robinson (1952) argued that financial development responds to the needs of a growing economy.

2.2.2 Harrod-Domar Growth Model

This model links economic growth to savings and investment, emphasizing the role of the financial sector in mobilizing savings to fund productive investments. It argues that increased savings, facilitated by financial institutions, enhance capital accumulation and productivity, leading to sustained economic growth. The Nigerian financial sector's role in channeling resources for investment aligns with this model, reinforcing its relevance to developing economies like Nigeria (Harrod, 1939; Akintola et al., 2020).

According to Ray 1998, the neo-classical growth model is an economic theory that outlines how a steady economic growth rate will be achieved with the optimal level of the forces of labour, capital and technology. He further stated that, by varying the amounts of labour and capital in the production function, an equilibrium position can be attained. For Ray, when a new technology becomes available, it will be necessary to adjust labour and capital to maintain growth equilibrium. Jhingan (2006), went further to presuppose that endogenous growth model emphasizes technical progress which results from the state of investment, the size of capital stock and the stock of human capital. This theory states that it is possible for policy measures to impact on the long-term growth rate of an economy. According to the theory, and as propounded by the neo-classical school of thought, long-term growth rate is

determined by variables within and not by an exogenous rate of technological progress. This study has a greater sympathy for the neo-classical growth model and the endogenous growth theory because both of them are considered as explaining the situation in developing economies such as Nigeria most lucidly.

2.3 Empirical Review

There are several literature on effect of financial sector development on economic growth across the globe. However, this study will reviewed some of these studies to provide empirical basis for its analysis as:

Efanga, Ogochukwu, and Ugwuanyi (2020) examined the effects of financial deepening on the Nigerian economy from 1981 to 2018. In this analysis, market capitalization, private sector credit, and money supply ratios to GDP were chosen as regressors, and real GDP was utilized as a stand-in for economic development in Nigeria. It was concluded that financial deepening had a positive impact on the Nigerian economy during the research period.

Duval, Hong, and Timmer (2020) examine the relationship between financial expansion and post-crisis productivity growth. It has been demonstrated that businesses with more financial constraints invest less in innovation, which reduced the growth of productivity.

In a sample of African economies between 1995 and 2014, Eke, Okoye, and Evbuomwan (2020) discovered no long-term causal relationship between human capital and financial deepening or entrepreneurship using data from the augmented Toda-Yamamoto approach.

Osasere, Bashiru, and Ehis (2020) examined the impact of financial deepening on economic growth in Nigeria using time series data spanning from 1990 to 2017. Two methods were used to assess the model's long-run equilibrium: multiple regressions and an error correction model. The variable has an impact on economic growth over the long term, as evidenced by the significant and negative connection shown by the ECM result. Additionally, the short run test demonstrates a negative and statistically insignificant association between GDP and the ratio of credit to the private sector to GDP (CPS_GDP). There is a statistically insignificant negative association between GDP and INFL. Additionally, a positive and statistically significant association was found between GDP and the money supply to GDP in the economy, whereas a positive and statistically significant relationship was found between GDP and gross fixed capital creation.

Samuel-Hope, Ehimare, and Osuma (2020) examined the effects of financial deepening on Nigeria's growth during a 38-year span, from 1981 to 2018. Examining the effects of the linkages between commercial banks' time and savings deposits, the money supply, and credit to the private sector were the main goals of the study. Data was gathered from multiple CBN Bulletin issues and examined using an ARIMA model. There was a long-term correlation found in the analysis, but no significant regressors. Economic growth was negatively connected with the private sector credit to GDP ratio, but positively correlated with the money supply to GDP ratio.

Akintola, Oji-Okoro, and Itodo (2020) analysed the contributions of the money, capital, and foreign exchange markets independently in order to investigate the impact of Financial Deepening development on economic growth in Nigeria using quarterly data spanning from 2000Q1 to 2019Q4. The results demonstrated that while all share indices had a positive and significant long-run relationship and the behaviour of the exchange rate spread was consistent with declining levels of real output growth, financial deepening and banking system liquidity had no effect on the growth of real output in the economy.

Sennuga, Adenaike, and Adedayo (2021) used time series data on Nigeria's GDP growth, real interest rate, gross domestic savings to GDP ratio, and domestic credit to the private sector to GDP ratio to ascertain the effect of financial development on economic growth. The real interest rate, the ratio of gross domestic savings to GDP, and the ratio of domestic credit to the private sector to GDP were all used as explanatory factors, with the annual growth rate of GDP acting as the dependent variable. 93% of GDP is explained by the factors taken into consideration, according to the coefficient of multiple determinations indicating a very excellent model fit. The findings indicated that the dependent variable (the GDP annual growth rate) is favourably correlated with domestic lending to the private sector but negatively correlated with real interest rates and gross domestic savings.

Ayadi (2021) investigated the relationship between savings and financial development and economic growth in Nigeria between 1981 and 2015 using autoregressive distributed lag (ARDL), kernel quantile regression, and simple ordinary least squares (OLS) models. Monetary growth is measured by taking the percentage of gross domestic product (GDP) as broad money (BMG). The amount of credit granted by the domestic financial industry to the private sector is measured by two metrics: Domestic Credit to the Private Sector (DCP) and Domestic Credit from the Financial Industry (DCF). The study's conclusions were contradictory: while wide money as a ratio to GDP had a large negative impact, two financial development criteria had a positive influence on Nigeria's economic growth. A considerable increase in savings rates accelerated economic growth. The quadratic results, which indicate non-uniformity in the impact of savings at the median growth level but a considerable contribution to growth at higher levels, suggest that there may be a threshold effect of savings on economic growth in Nigeria. For many years, macroeconomists and financial economists have struggled to understand how the Financial Deepening contributes to economic expansion.

Emmanuel and Odishika (2022) empirically examined the impact of financial deepening on Nigeria's economic growth from 1986 to 2020 with time series data from 1986 –2020 gotten from the Central Bank of Nigeria Statistical Bulletin employed. A model was drawn and the variables were subjected to a unit root test with stationarity achieved at either order zero I(0) or order one I(1). The model was thus analysed using the Auto-regressive Distributed Lag Model (ARDL) and the Error Correction Mechanism estimation techniques. The estimates from ECM and the long run show that money supply, market capitalization and liquid liabilities positively impact economic growth in Nigeria while credit to private sector and lending rate has no significant impact on economic growth in Nigeria. However, because a nation's Financial Deepening encompasses a broad spectrum of financial institutions, markets, and products, these indicators are simply approximations and fall short of representing all aspects of financial development. Financial progress can be measured using proxies like stability, efficiency, depth, and access to financial markets and financial institutions, the two main parts of the Financial Deepening.

A study by Odimgbe and Ogueze (2024) examined the effect of financial development indicators on Nigeria's economic growth from 1981 to 2021. The researchers considered variables such as credit to the private sector, broad money supply, market capitalization, and banks' asset base, using Gross Domestic Product (GDP) as the dependent variable. Their findings suggest that these financial development indicators contribute positively to economic growth in Nigeria.

Similarly, Ayeni et al. (2024) investigated the impact of financial development on economic growth in Nigeria between 1986 and 2022. Utilizing an autoregressive distributed lag model,

they found that interest rates and domestic credit to the private sector positively influence GDP growth, while broad money supply had a negative impact. The study concluded that financial development contributes to economic growth, particularly when adequate credit is allocated to the private sector to enhance investment.

Furthermore, Nkamnebe et al. (2023) analyzed data from 1985 to 2022 to assess the impact of financial development on Nigeria's economic growth. Their results indicated that variables such as the all-share index, exchange rate, and financial technology positively and significantly affect economic growth. Conversely, remittances showed a negative and insignificant impact. The study validated the demand-following theory, suggesting that economic growth stimulates financial development.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This study will adopt ex post facto research design which involves observation of variables void of intentional manipulation. Several of the benefits of expost facto research design include; (a) It enables researcher to deal with human behavior and economic indices summarized in the form of secondary data. (b) It gives the researcher power over the variables by being able to control them. (c) It provides enhanced control over the confounding variable, which is the third variable which impacts the cause and effect. The years 1986–2024 are covered by the study on the influence of financial deepening on economic growth in Nigeria.

Meanwhile, the model specified in this study is in line with endogenous growth model (1969). It applied Autoregressive distributed lag (ARDL) as method of data analysis. This method has numerous econometric advantages compare to other co-integration methodology. Firstly, problem of endogeneity are alleviated as result of adding appropriate lags and difficulties in testing hypotheses on estimated parameters in long run related with Engle-Granger methodology are removed.

Furthermore, this study conducted post estimation tests or diagnostic tests to verify the applicability and reliability of the model built to analyze the effect of financial deepening on economic growth in Nigeria

3.2 Specification of the Model

The theoretical model that was used in this study to drive our objective of determining the relationship between financial sector development and economic growth was premised on neoclassical growth model of Solow (1956). This model posits that economic growth of a nation is a function of two factors input labour and capital in a given economy.

The model is stated as follows:

$$Y = Af(K, L) \quad \text{.....(3.2)}$$

Where Y is the total output of the economy, L is the quantity of labour used in the production process, K is the quantity of capital used in the production process, A is the level of technology or total factor productivity (Solow residual). Similarly, Goode (1959) advocates the inclusion of human capital, education or knowledge in the growth accounting equation. Hence, equation (3.2) is restated thus:

$Y = Af(K, L, H)$……..(3.3)

Taking the log of equation (2) we have;

$InY = In\ A + \alpha\ In\ K + \beta\ In\ L + \gamma\ In\ H + \mu$……. (3.4)

Using equation (3) to drive linear equation we have;

$Y = \beta1 + \beta2K + \beta3L + \beta4\ H + \mu$…… (3.5)

Where $\beta1, \beta2, \beta3, \beta4$ are parameters, which are $\beta1>1$, $0< \beta2<1$, $0< \beta3<1$, $0<\beta4<1$

$Y = InY$, $\beta1 = In\ A$, $\beta2K = \alpha\ In\ K$, $\beta3L = \beta\ In\ L$, $\beta4H= \gamma\ In\ H$ and μ= error term which is random variable.

Equation (4) is augmented to include financial development by decomposing capital K into physical and financial capital (Financial development) thus equation (4) is written as

$Y = \beta1 + \beta_2K + \beta_3F + \beta_4\ L + \beta_5\ H + \mu$…….. (3.5)

Where Y is the total output of the economy (economic growth), L is the quantity of labour used in the production process, K is the quantity of capital used in the production process, F is the financial development variable, H is the human capital and $\beta1$ is the technology or total factor productivity (Solow residual).

This study specified the relationship between financial sector development and economic growth, by stating the simple model that economic growth proxy by RGDP as function of financial development thus;

$RGDP=f(FIN)$ ……..…….(3.6)

$RGDP=f(FIN, MCA, BDR, INR, PRS)$…….(3.7)

Equation (7) is expressed in explicit econometric form thus;

$RGDP_t= \beta_1 + \beta_2FIN_t + \beta_3MCA_t + \beta_4BDR_t + \beta_5INR_t + \beta_6PRS_t + \varepsilon$ ..……..……(3.8)

Equation (8) is restated in autoregressive distributed lag form as follows:

$$\Delta RGDP_t= \alpha_0 + \Sigma^{M}_{I=1}\beta_1\Delta GDP_{t-i} + \Sigma^{M}_{I=1}\beta_2\Delta FIN_{t-i} + \Sigma^{M}_{I=1}\beta_3\Delta MCA_{t-i} + \Sigma^{M}_{I=1}\beta_4\Delta BDR_{t-i} + \Sigma^{M}_{I=1}\beta_5\Delta\ INR_{t-i} + \Sigma^{M}_{I=1}\beta_6\Delta PRS_{t-i} + \delta_1RGDP_{t-i} + \delta_2FIN_{t-i} + \delta_3MCA_{t-i} + \delta_4BDR_{t-i} + \delta_5INR_{t-i} + \delta_6PRS_{t-i} + \varepsilon_i \quad (3.9)$$

Where:

Financial Development Index (FDI) isa comparative ranking of nations based on the scope, accessibility, and effectiveness of their financial markets and financial institutions. It is the result of combining the Financial Markets index with the Financial Institutions index**.**

Market Capitalization (MCA): This involves data on stock market turnover ratio (ieRatio of market capitalization to GDP).

PRS = % Private Sector credit to GDP in Nigerian Economy

BDR= Bank Deposit Rate, this ratio of bank deposit rate to GDP in Nigeria

INR = Interest Rate i.e this is the price charge on Borrowed Capital from Money deposit Banks in Nigeria

4.0 DATA PRESENTATION AND ANALYSIS

4.1 Data presentation

This study presents its data on appendix I. These data involved in this analysis covered real gross domestic product (RGDP) in billion naira, financial development (FIN) index form, market capitalization (MCA) in billion naira, private sector investment (ratio of credit to private sector to GDP%), bank deposit ratio (%) and interest rate (%). Meanwhile, the time series data are presented in appendix I.

4.2 Descriptive statistics

This descriptive statistics is preliminary test used in ascertain the trend and behaviour of time series data used in this analysis. The summary is presented in Table 4.1.

Table 4.1: Summary of Descriptive Statistics

Sample: 1990 2023

	LOG(RGDP)	LOG(FIN)	LOG(MCA)	LOG(PRS)	LOG(BDR)	INR
Mean	3.904671	2.777675	7.759955	2.462560	2.069715	24.71158
Median	4.336452	2.714522	8.699573	2.336306	1.979509	23.55125
Maximum	5.703166	3.299266	11.22795	3.124778	3.006146	36.09000
Minimum	0.825025	2.135849	2.791165	1.758920	1.191420	18.36250
Std. Dev.	1.357977	0.358359	2.502029	0.480338	0.489531	4.354884
Skewness	-0.749297	-0.172078	-0.515123	0.007987	-0.052277	0.494107
Kurtosis	2.614804	1.552636	1.981687	1.269593	1.780987	2.542016
Jarque-Bera	3.391729	3.135518	2.972690	4.242297	2.120644	1.680615
Probability	0.183441	0.208512	0.226198	0.119894	0.346344	0.431578
Sum	132.7588	94.44094	263.8385	83.72704	70.37031	840.1939
Sum Sq. Dev.	60.85537	4.237906	206.5849	7.613926	7.908143	625.8455
Observations	34	34	34	34	34	34

Source: Researcher's Computation, 2025.

From the Table 4.1, reveals that Nigeria's mean RGDP for the study period is ₦3.904671 billion, which suggest a robust economy with potentials for further growth. FIN has an

average value 2.777675 which falls below the usual base index value of 100. This indicates that on the average, financial sector development remained moderate within the time period. Market capitalization (MCA) within the period averaged at ₦7.759955bnin Nigeria. Furthermore, the mean value of credit to private sector to ratio of GDP stood at 2.462560 % for Nigerian economy. In the same vein, bank deposit rate was 2.1% and interest rate averages 24.7% across the economy.

However, all other indices are presented in Table 4.1. In the above Table 4.1, the most important statistics is the JarqueBera Statistics and its probability values. That is, 3.391729 (0.183441), 3.135518 (0.208512), 2.972690 (0.226198), 4.242297 (0.119894), 2.120644 (0.346344) and 1.680615 (0.431578) indicated that all variable are normally distributed since their probabilities are insignificant in the model.

4.3 ARDL Bound Test for Cointegration

Table 4.2: **ARDL Bound test for Long-run Equilibrium**

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	9.717594	10%	2.26	3.35
K	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Researcher's Computation, 2025

In Table 4.2, it revealed that there are long-run relationships among the studied variables. It is indicated that the estimated F-statistic of 9.717594exceeds the upper critical bounds at 1%, 5% and 10% critical values respectively. This indicated that there is long-run relationship among Real Gross Domestic Product (RGDP), financial development (FIN), Market capitalization (MCA), private sector credit (PRS), Bank deposit rate (BDR) and Interest rate in the Nigerian economy. It should be noted after establishing the evidences of long-run relationship among the variables in Table 4.2. This study then presented ARDL Long-run coefficients in Table 4.3.

4.4 ARDL Long-run Result

The long-run coefficients are presented in Table 4.3. This reveals how financial sector development impact on the real gross domestic product in Nigeria.

Table 4.3: ARDL Long-run Result on Financial sector development and Economic growth in Nigeria

Depn: **RGDP**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(FIN)	0.037606	0.652222	-3.421006	0.0077 **
LOG(MCA)	0.006105	0.396314	0.772380	0.4478
LOG(PRS)	0.029096	1.809214	7.592774	0.0501**
LOG(BDR)	0.017917	9.049617	0.577695	0.5691
INR	-0.024157	0.084955	-0.284357	0.7787

Note: ** denoted significant @ 5% level of Statistical Significance

Source*:* Computed by Authour Using E-views Version 10, 2025

From the Table 4.3, the result showed that the coefficient of financial sector development (FIN) of 0.037606; this agreed with the appriori expectation that there is positive impact between FIN and RGDP in a given economy. That is, by the coefficient of FIN of 0.037606, it means 1 unit or 1% increase in financial Sector development would result 0.037606 units or 3.7% increase in Real Gross Domestic Product in Nigerian economy within the study periods of 1990 to 2023. This variable has significant value of *T-value* of -3.421006 and *P-value* of 0.0077. This result revealed that financial sector development is significant in the model at 5% level of statistical significance.

More to that, the result also indicated that the co-efficient of market capitalization (MCA) aligns with apriori expectation that is a positive relationship exists between market capitalization and real gross domestic product in Nigerian economy. From Table 4.3, the coefficient MCA of 0.006105, it means if 1% or 1 unit increase in Market capitalization (MCA) would lead to 0.006105 units or 0.6% increase in RGDP. In addition, it was statistically insignificant by its *t-value* of 0.772380and *p-value* of 0.4478respectively in the long-run.

Furthermore, credit to private sector has a positive coefficient with Real GDP which is in line with economic theory. This assumed that all things being equal, 1unit or 1% increase in private sector would increase real GDP by 0.029096 units or 2.9% change in RGDP. The implication of this result is that when the economy tend provide credit facilities to private sector, it would result to trajectory growth in Real GDP of Nigeria which is in line with appriori expectation as stated in chapter three (3). In the same vein, its *t-value* of 7.592774 and p-value of 00.0501 proved that the variable was significant in the model.

Similarly, the bank deposit rate has positive coefficient of 0.017917; this shows that if BDR increases by 1 unit or 1 %, the RGDP grow by 0.017917 units or 1.8% in Nigerian economy. Thus this result negates appriori expectation of inverse relationships exist between BDR and RGDP in any economy with assumptions that all other factors being equal and vice versa. Statistically, the Bank deposit ratio was significant by *p-value* of 0.5691 and *t-value* of 0.577695 respectively. This means that the variable is not significant in the model.

On the other hand, the interest rate has a negative coefficient of -0.024157; this shows that as INR increases by 1 unit or 1% would lead to -0.024157 or 2.4% decrease in Real GDP in Nigeria. The implication of this result is that when the country experience high cost of capital, the Real GDP would be affected in real term which corroborated with appriori expectation as stated in chapter three (3). Moreover, it can be seen that the *t-value* of -0.284357 and p-value of 0.7787 proved that the variable was insignificant at 5 % level of statistically significance in the model.

4.5 Short-run impact of financial sector development on economic growth in Nigeria

Table 4.4: ARDL Short-run Result

ARDL Error Correction Regression
Dependent Variable: DLOG(RGDP)
Selected Model: ARDL(1, 1, 0, 1, 1, 0)
Case 3: Unrestricted Constant and No Trend
Date: 03/18/25 Time: 13:20
Sample: 1990 2023
Included observations: 33

ECM Regression
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.052535	0.058850	1.080805	0.8020
DLOG(FIN)	0.461837	0.117279	-3.937941	0.0007
DLOG(PRS)	0.038841	0.082467	-0.470987	0.6421
DLOG(BDR)	0.045722	0.102933	-0.444197	0.6611
CointEq(-1)*	-0.700530	0.008371	-8.425004	0.0000

R-squared	0.823373	Mean dependent var	0.147822
Adjusted R-squared	0.798140	S.D. dependent var	0.118489
S.E. of regression	0.053236	Akaike info criterion	-2.889443
Sum squared resid	0.079353	Schwarz criterion	-2.662700
Log likelihood	52.67582	Hannan-Quinn criter.	-2.813151
F-statistic	32.63148	Durbin-Watson stat	1.638696
Prob(F-statistic)	0.000000		

* p-value incompatible with t-Bounds distribution.

In the Table 4.4, the ECM of -0.700530 which represents speed of adjustment in ARDL modelling indicated the convergent point. That is, the coefficient of the ECM shows the speed of adjustment to the deviation in the short run equilibrium. The negative value of the

coefficient of ECM implies that there is a long run equilibrium among real gross domestic product (RGDP), financial sector development (FIN), Market capitalization (MCA), credit to private sector (PRS), Bank deposit Rate (BDR) and interest rate (INR) in the Nigerian economy. It also statistically significant in the model by the *t-value* of -8.425004and its probability value of 0.0000.

More to that, the coefficient of ECM which is (-0.700530) indicated that the model will adjust by 70% of the equilibrium in the long run. At this point, -0.700530implied that when there is a state of disequilibrium among RGDP, FIN, MCA, PRS, BDR and INR in Nigeria. This phenomenon would be adjusted back to equilibrium in one (1) year and five (5) months based on the outcome of the estimation.

In the short run, the coefficient of determinant R^2 = 0.823373 or 82 % approximately; it means that all the variables (FIN, MCA, PRS, BDR and INR) in the model can cause the variation in Real gross domestic product (RGDP) by 82% and leaving only 18% out to other factors not captured in this study. This shows that the model is fit and good for policy recommendations for the Nigerian economy

In addition, adjusted R squared corroborated the fitness and goodness of the model in applying on the examination of impact of financial sector development on economic growth in Nigeria. The adjusted R squared of this R^{-2} =0.798140or 80% variation in real gross domestic product was actually caused by financial sector development, market capitalization, credit to private sector, bank deposit ratio and interest rate in Nigeria.

Furthermore, the coefficients of various parameters in Table 4.4 relate to change in the short run among the financial sector development, credit to private sector and bank deposit rate and economic growth in Nigeria. The coefficients of each of this variable would be interpreted in the following paragraph.

First and foremost, the previous value of Real Gross Domestic Product (RGDP-1) of 0.447862, it revealed that 1% increase in the lagged value have contributed to the economic growth in Nigeria by 0.447862 units or 45%. The coefficient of RGDP-1 was significant in the model based on *t-value* of 5.080193 and *p-value* of 0.0001.

On the main variable of financial sector development (FIN), it has coefficient of 0.461837 which implied 1% increase in financial sector development would lead to 0.461837 units or 46% rise in economic growth in Nigeria. The financial sector development is statistically significant in the model as seen in *t-value* of -3.937941 and *p-value* of 0.0007.

Furthermore, the coefficient of PRS is 0.038841this means that a unit or 1% change in the value of PRS would result to 0.038841units or 3.8% increase in real gross domestic product in the economy. However, it was statistical insignificant in the model as it can be seen in *p-value* of -0.470987 and *t-value* of -0.470987.

In the same vein, the coefficient of bank deposit ratio (BDR) of 0.045722 in the short-run, this implied a unit or 1% increase in BDR would increase the RGDP by 0.0457220units or 0.4%. Moreover, it was statistically insignificant as seen in *t-statistic* of -0.444197 and *p-value* of 0.6611 in the estimated result.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study examined the impact of financial sector development on economic growth in Nigeria for the period of 1990 to 2023. It underpinned its analysis on the endogenous growth theory. This theory offers useful link through which accumulated savings (deposits) held by banks are channeled to productive investments (through lending activities) for economic growth in a given economy.

It adopted ex post facto research design to study the impact of financial sector development on economic growth in Nigeria. On the methodology, this study applied descriptive statistics which reveals the variables are normally distributed based Jacque Berra statistics and its p-values. It also used the Augmented Dickey Fuller (ADF) test for unit root analysis on the data sourced from the Central Bank Statistical Bulletins and World Bank development indicator, (WDI, 2024). The ADF result shows that RGDP, FIN, BDR and PRS are stationary at first difference whereas market capitalization and interest rate are stationary at level which necessitated the choice of ARDL method of data analysis.

In addition, the F-Bounds test for the Autoregressive Distributed Lag (ARDL) model revealed that the variables exhibit cointegration with one another. The application of the test to the model led to the discovery of this fact. In addition to this, the error correction representation for the ARDL model that was used provided evidence that confirmed a long run relationship. According to the coefficient of ECM which is (-0.700530) indicated that the model will adjust by 70% of the equilibrium in the long run. At this point, -0.700530implied that when there is a state of disequilibrium among RGDP, FIN, MCA, PRS, BDR and INR in Nigeria. This phenomenon would be adjusted back to equilibrium in one (1) year and five (5) months based on the outcome of this estimation.

In addition, adjusted R squared corroborated the fitness and goodness of the model in applying on the examination of impact of financial sector development on economic growth in Nigeria. The adjusted R squared of this R^{-2} =0.798140 or 80% variation in real gross domestic product was actually caused by financial sector development, market capitalization, credit to private sector, bank deposit ratio and interest rate in Nigeria.

On the main variable of financial sector development (FIN), it has coefficient of 0.461837 which implied 1% increase in financial sector development would lead to 0.461837 units or 46% rise in economic growth in Nigeria. The financial sector development is statistically significant in the model as seen in *t-value* of -3.937941 and *p-value* of 0.0007.

Furthermore, the coefficient of PRS is 0.038841this means that a unit or 1% change in the value of PRS would result to 0.038841 units or 3.8% increase in real gross domestic product in the economy. However, it was statistical insignificant in the model as it can be seen in *p-value* of -0.470987 and *t-value* of -0.470987.

In the same vein, the coefficient of bank deposit ratio (BDR) of 0.045722 in the short-run, this implied a unit or 1% increase in BDR would increase the RGDP by 0.0457220 units or 0.4%. Moreover, it was statistically insignificant as seen in *t-statistic* of -0.444197and *p-value* of 0.6611 in the estimated result.

On the long-run ARDL result, it reveals that the positive impact of financial sector development (FIN) on Real Gross Domestic Product in Nigerian economy within the study

periods of 1990 to 2023.This result revealed that financial sector development is significant in the model at 5% level of statistical significance.

More to that, the result also indicated that the co-efficient of market capitalization (MCA) aligns with apriori expectation that is a positive relationship exists between market capitalization and real gross domestic product in Nigerian economy but it was statistically insignificant by its *t-value* of 0.772380 and *p-value* of 0.4478 respectively in the long-run.

Furthermore, credit to private sector has a positive coefficient on Real GDP which is in line with economic theory. In the same vein, its *t-value* of 7.592774 and p-value of 00.0501 proved that the variable was significant in the model.

Similarly, the bank deposit rate has positive impact on the RGDP grow by 0.017917 units or 1.8% in Nigerian economy. Thus this result negates appriori expectation of inverse relationships exist between BDR and RGDP in any economy with assumptions that all other factors being equal and vice versa. Statistically, the Bank deposit ratio was in significant by *p-value* of 0.5691 and *t-value* of 0.577695 respectively.

On the other hand, the interest rate has a negative impact on Real GDP in Nigeria. The implication of this result is that when the country experience high cost of capital, the Real GDP would be affected negatively. Moreover, it can be seen that the *t-value* of -0.284357and p-value of 0.7787 proved that the variable was insignificant at 5 % level of statistically significance in this model.

The model successfully passed all of the tests for normality, serial correlation, heteroscedasticity, the Ramsey RESET test, and model stability, according to the results of the diagnostic tests. This demonstrates the model's suitability for policy recommendations and implementations in Nigeria.

5.2 Conclusion

According to the findings of this research, it submits that financial sector development has positive impact on economic growth in Nigeria and it statistically significant both in short-run and long-run.

5.3 Recommendations

Based on the empirical findings and conclusion, the following policy options are made as:

i. Monetary authority should formulate financial inclusive policy to embrace more people into the financial net of the economy

ii. Federal government should provide avenue that will increase credit facilities to private sector in Nigeria for aggregate investment which improve economic growth in the country.

iii. Nigeria Exchange group should create awareness on opportunity exiting in the stock market for high yield of market capitalization in Nigeria.

iv. Money deposit banks should increase return on deposits to attract more money for investment in the economy.

v .Central Bank of Nigeria should reduce the monetary policy rate which can minimize the negative impact of interest rate on economic growth in Nigeria.

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