ASSESSING THE FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH NEXUS IN NIGERIA: IMPACT AND CAUSALITY

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Abstract

The Nigerian financial sector is crowded with upheavals that have frustrated it's potential to enhance economic growth. The investigates financial development and economic growth, nexus in Nigeria: impact and causality between 1981 to 2023, using data sourced from CBN Statistical Bulletin. The autoregressive distributed lag model was employed and the long run result shows that inflation is negative and significally related to gross domestic product growth (economic growth). The study also reveals that the coefficient of broad money supply has a positive but insignificant effect on gross domestic product growth (economic growth). The Grainger causality analysis shows that no causal relationship between interest rate and gross domestic product growth and between credit to private sector and gross domestic product growth.

1. Introduction

The relationship between financial development and economic growth has received extensive attention from both economic scholars and policymakers across the globe. Schumpeter (1911) is one of the earliest scholars to investigate the correlation between financial development and economic growth. His proposition was that the services rendered by monetary institutions, such as mobilization of savings, project evaluation, risk management, and transaction facilitation, are key ingredients of financial technological progress and consequently, economic growth. Shaw (1973) further highlighted the importance of financial intermediation in boosting economic growth. He explained that firms must rely on external financing in the form of bank loans, which leads to an increase in bank deposits and facilitates greater access to credit capital. Thus, increased financial intervention can stimulate economic growth.

According to Creane et al. (2004), a modern financial system promotes investment by identifying and funding good business opportunities, mobilizing savings, monitoring the performance of managers, enabling the trading, hedging, and diversification of risk, and facilitating the exchange of goods and services. These functions result in a more efficient allocation of resources, leading to a more rapid accumulation of physical and human capital and faster technological progress,

which in turn fuels economic growth. Financial development is one of the main factors influencing growth in developed and developing economies. It consists of various indicators such as broad money supply, credit to the private sector, and interest rates. These indicators measure the depth of financial development. The component of money supply used as an indicator of financial development is broad money supply (M2), which represents the amount of money in circulation and demand deposits.

The ratio of M2 to GDP provides a rough estimate of the depth of financial development. If M2/GDP increases simultaneously, it indicates an increasing depth of financial development. However, if GDP increases faster than money supply, the financial sector is said to be shrinking, making it difficult to predict the impact of financial development on economic growth over the long run (World Bank, 2022). The growth and development of every economy depend on the performance of various sectors, with the financial sector playing a crucial role. The development of the financial sector enhances efficient access to financial services and products. Financial development is a process that builds the financial sector through financial institutions such as banks, insurance companies, and financial markets. This process includes policies and factors that rely on the availability of financial resources to enhance economic growth.

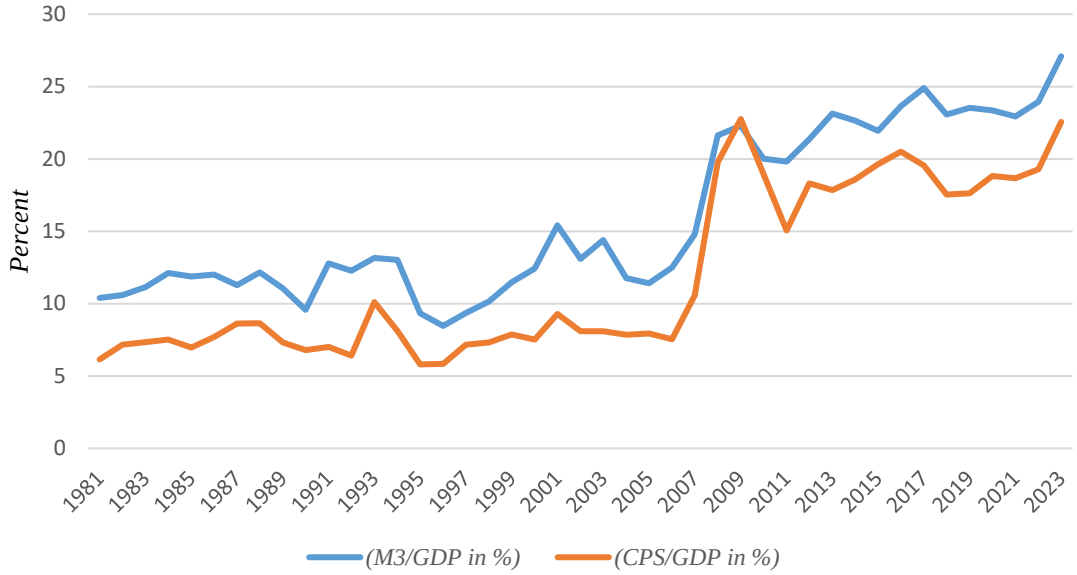
Financial development is an economic driver of a country that relies on financial institutions and markets to provide financial resources. These institutions and markets require infrastructure and policies to strengthen their functions (Efayena & Olele, 2024; Cihak et al., 2012). The features of financial development provide a broader understanding of the importance of the financial sector in contributing to economic growth. As a result, financial development indicators, such as financial institutions and markets, have established a strong foundation enabling them to contribute to economic growth (Sahay et al., 2015). Developments in the financial sector enable the flow of funds, which drives consumption and investment, thereby increasing employment, reducing poverty, and improving overall economic performance (Chamyou & Asongu, 2017).

There are key findings on how financial development affects economic growth. The first is through the savings rate, which leads to investment and capital accumulation. The second is through channel allocation, where financial development enhances efficient investment allocations, thereby increasing productivity (Nayak, 2022). Economic theory suggests that financial development occurs through an organized financial system, which allocates financial resources to productive sectors in a way that contributes to economic growth, capital accumulation, and economic efficiency.

For Nigeria, studying the relationship between financial development and economic growth is a vital one considering the continuing progress in its financial sector performance. According to the Central Bank of Nigeria Statistical Bulletin (2023), the depth of its financial sector showed some significant improvements as

broad money supply to nominal GDP ratio increased from 19.82 percent in 2011 to 27.09 percent in 2023. This can be seen in Figure 1.

Figure 1. Nigeria Financial Development



The banking sector also showed stronger capacity to finance real sector activities with substantial credits flows to the core private sector as CP/GDP ratio increased from 15.07 percent in 2011 to 22.56 percent in 2023. In addition, the increased use of the various electronic money products reflected the shift away from cash transaction and thus an improvement in the efficiency of funds intermediation. Evidently, improved financial development is expected to have a significant effort on the economy and fasten the pace of economic growth. By economic growth, it means increase in real per capita income over time, it also connotes rising national income over time as a result of increase in its determinant (Banton, 2023).

Similarly, credit to private sector from CBN (2023) revealed that the credit issued to the Nigerian private sector rose to 41.8 trillion Naira as of December, 2022 which represents 6.61 trillion Naira in new net loans compared to 35.19 trillion as at the beginning of the year. However, financial development has been fluctuating and has not contributed significant impact on economic growth in Nigeria. Although government, over the years have introduced policies to enhance the performance of the financial development and appreciable development is yet to be achieved, this is because the indicators of financial development have been of low ebb, for instance private sector credit has been grossly inadequate and this has affected the investment potentials of the economy. Nigerian economy depends on the oil sector and failure to diversity the revenue base and foreign exchange in the economy led the country to the recent recession in the second quarter of 2016 where many bankers lost their jobs (Economic Recovery and Growth plan, ERG, 2017).

Despite increased financial sector reforms in Nigeria over the last decades existing evidence on the mechanism by which financial development impact growth in Nigeria is still weak. The objective of this paper is to investigate financial development and Economic growth in Nigeria. Thus, this study adopted the Autoregressive Distributed Lag (ARDL) model. The study will be significant in determining the progress made so far by the Nigerian Government in improving the economy through financial development. The study will also inform policy decisions and assist policy makers to ascertain if financial development has been able to enhance economic growth.

The study will be conducted on Nigeria and will cover 42 years, from 1981 – 2023. These data will be sourced from World Development Indicators (WDI), and Central Bank of Nigeria (CBN). The study attempts to fill this gap by addressing the following two questions:

(a) Does financial development impact economic growth?
(b) Does a causal relationship exist between financial development and economic growth?

The remainder of this paper is organized as follows: section 2 provides the literature review, section 3 provides the materials and method, section 4, examines the empirical results and finally, section 5 outlines the concluding remarks.

2. Literature Review

There are empirical studies that analyzed the effect of financial development on economic growth. For instance, 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 shows 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.

Okeke (2022) investigated financial development and economic growth in Nigeria from 1986 to 2020, using ordinary least square regression analysis. The findings of the study revealed that money supply to GDP has positive and significant relationship with economic growth in Nigeria. While private sector credit to GDP and insurance premiums to GDP ratio had negative relationship with economic growth in Nigeria.

Argandi et al. (2015) carried out a study on 52 countries and proved that financial development does not have a significant impact on economic growth. The weak

condition of financial development in terms of institutions and markets is the reason for the lack of contribution from the financial sector to the economy.

Using the dynamic panel General Method of Moment (GMM) technique, Ngogang (2015) examined the impact of financial development on the economic growth of 21 sub-Saharan African countries. The study reveals that there is a strong direct relationship between financial development and economic growth. Luintel et al. (2016) analyzed the impact of financial development on economic growth in 60 countries and found that it had a significant effect.

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 the 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.

Ndubisi (2017) investigated the relationship between financial development and economic growth in Nigeria, using annual data for the period 1981 – 2014. The study employed multivariate VAR framework approach to co-integration which was used to evaluate the long-run relations between financial development and economic growth. The result revealed that real GDP and financial development variables have at least common stochastic trend driving their relationship.

Nguyen et al. (2019) conducted a study in 90 countries and the findings show that financial development has a negative effect on economic growth in high-income countries. However, it has a positive effect in low-income countries.

Demetriades and Rousseau (2016) analyzed financial development and economic growth in 84 countries and the result indicate that financial development has no significant effect on economic growth due to the declining allocation of financial resources during the year of the study.

Gozgor (2014) analyzed financial development and economic growth in 35 organizations for economic cooperation and development countries. The results prove that economic growth can be achieved by financial development, which becomes an important indicator for productive activities to continue to develop.

Ebiringa and Duruibe (2015) used vector autoregressive model to analyze the relationship between financial system development and economic growth in Nigeria. The empirical results reveal that there is no long-run causality from financial system development indicators to growth. This implies that the role of the financial institutions in terms of credit access to the less privileged played towards the output growth has been less significant in Nigeria.

Omankhanlen et al. (2022) investigated 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 markets 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. Ibrahim and Alagidede (2018) found that even though sub-Saharan African countries are still developing financial development is still able to make a positive contribution to economic growth.

The importance of financial development in economic growth has inspired many researchers to assess the actual nature of the relationship between financial development and economic growth. To this end, some have employed various econometric models and variables to assess the relationship in a particular country (Nigeria) (Ndubisi, 2017; Iheanacho, 2016; Monogbe et al., 2016; Okeke, 2022; Adeyemo & Chinonso, 2022; Ebiringa & Duruibe, 2015; Omankhanlen et al., 2022) or group of countries (Zaheer et al., 2022; Samargandi et al., 2015; Ngogang, 2015; Luintel et al., 2016; Nguyen et al., 2019; Demetriades & Rousseau, 2016; and Gozgor, 2014). The results are frequently mixed with some of them having positive impact and others having negative impact and relationships.

A review of the literature shows a lack of research on the impact of financial development on economic growth in Nigeria, as well as the causal nexus that exists between the variables.

3. Methodology

3.1. Theoretical Framework

Financial deepening theory by Gurley and Shaw (1967) is adopted in this research, the theory serves as the framework for this study in order to test the impact and causality of financial development on economic growth. The theory shows the relationship between household, financial sector and firms and how it leads to economic growth.

$$y = f(h, f_s, f) \quad (1)$$

Where y, h, f_s, and f represent growth, household, financial sector, and firms, respectively.

3.2. Model Specification

This study adopted the model of Omankhanlen et al. (2022) to investigate the impact of financial development on economic growth in Nigeria. The model is specified as:

$$GDPG = f(M_2, CPS, INF, INT) \quad (2)$$

Where, GDPG denotes *Growth in Gross Domestic Product*; M_2denotes *broad money supply as a percentage to GDP*; CPS represents *Credit to Private Sector as a percentage to GDP*; INF denotes *inflation*; and INT represents *interest rate.*

However, this model was adopted because ARDL model allows the mix order of integration which makes it different from ordinary least square model that allows order of integration at level and also cointegration model which allows order of integration at first difference (Efayena. & Olele, 2023).

Furthermore, financial development does not have a single measure, therefore, instead of a single proxy: two measures will be adopted from the work of Omankhanlen et al. (2022) which are M_2 and CPS. M_2 was chosen because it has a significant impact on economic growth while credit to private sector was also chosen in order to determine its impact on the economy.

In addition, growth will be proxied by growth rate in GDP while financial development (FD) will be proxied by broad money supply (M_2) as a percentage of GDP, and credit to private sector as a percentage of GDP. The control variables in the model include inflation and real interest rate.

The ARDL model is estimated as

$$\begin{aligned} GDPG_t &= a_0 + \sum_{t}^{N} \beta_1 \Delta\, GDPG_{t-1} \\ &+ \sum_{i}^{N} \beta_2\, \Delta M_{2t-1} \\ &+ \sum_{i}^{N} \beta_3 \Delta\, CPS_{t-1} + \sum_{i}^{N} \beta_4\, \Delta\, INF_{t-1} \\ &+ \sum_{i}^{N} \beta_5\, \Delta INT_{t-1} + Q_1 M_{2t-1} + Q_2 CPS_{t-1} + Q_3 INF_{t-1} + Q_4 INT_{t-1} \\ &+ v_t \end{aligned} \quad (3)$$

Similarly, the short-run ARDL model is given as:

$$GDPG_t = a_0 + \sum_{t}^{N} \beta_1 \Delta GDPG_{t-1} + \sum_{i}^{N} \beta_2 \Delta M_{2t-1} + \sum_{i}^{N} \beta_3 \Delta CPS_{t-1} + \sum_{i}^{N} \beta_4 \Delta INF_{t-1} + \sum_{i}^{N} \beta_5 \Delta INT_{t-1} + u_t \quad (4)$$

Where:
Δ is the first difference operator
N is the optimal lag length
$\beta_1, \beta_2, \beta_3, \beta_4, and\ \beta_5$ represent short-run dynamics of the model
$Q_1, Q_2, Q_3, Q_4\ and\ Q_5$ represent the long-run elasticities.

- **Granger causality**

After ARDL model, pairwise Granger causality test developed by Granger (1988) was employed. Since ARDL cannot determine the direction of relationship among the variables, Granger causality test assists the study to know the variables that Granger cause each other or whether no relationship exists. The decisions whether to accept or reject the hypothesis are made on the value of the F-statistics and the probability. There exist three types of causality: bidirectional causality, which arises when the two variables relate with each other, that is, they influence one another; unidirectional causality occurs when only one variable influence the other variable and when no causality occurs from the variables implies that none of the variable relates. However, the Granger equations for the model are presented as follows:

$$GDPG_t = \sum_{i=1}^{n} \beta_i\, GDPG_{t-1} + \sum_{j=1}^{n} \alpha_j\, M_{2t-j} + \mu_{1t} \quad (5)$$

$$M_{2t} = \sum_{i=1}^{n} \rho_i\, M_{2t-1} + \sum_{j=1}^{n} \sigma_j\, GDPG_{t-j} + \mu_{2t} \quad (6)$$

$$GDPG_t = \sum_{i=1}^{n} \gamma_i\, GDPG_{t-1} + \sum_{j=1}^{n} \vartheta_j\, INF_{t-j} + \mu_{3t} \quad (7)$$

$$INF_t = \sum_{i=1}^{n} \phi_i \, INF_{t-1} + \sum_{j=1}^{n} \theta_j \, GDPG_{t-j} + \mu_{4t} \quad (8)$$

$$GDPG_t = \sum_{i=1}^{n} \delta_i \, GDPG_{t-1} + \sum_{j=1}^{n} \pi_j \, INT_{t-j} + \mu_{5t} \quad (9)$$

$$INT_t = \sum_{i=1}^{n} \eta_i \, INT_{t-1} + \sum_{j=1}^{n} \psi_j \, GDPG_{t-j} + \mu_{6t} \quad (10)$$

$$GDPG_t = \sum_{i=1}^{n} \varphi_i \, GDPG_{t-1} + \sum_{j=1}^{n} \tau_j \, CPS_{t-j} + \mu_{7t} \quad (11)$$

$$CPS_t = \sum_{i=1}^{n} \omega_i \, CPS_{t-1} + \sum_{j=1}^{n} \dot{z}_j \, GDPG_{t-j} + \mu_{8t} \quad (12)$$

According to equation (5), M_2 Granger causes GDPG when the past (lagged) values of GDPG and M_2 really cause the behavior of the current value of GDPG. Equation (6) also shows that GDPG is said to Granger cause M_2 if the past (lagged) values of M_2 and GDPG cause the behavior of the current value of M_2. This is also applicable to equations (7)-(12).

- **Diagnostic tests**

To fulfill the basic assumptions, one underlines ARDL, which emphasizes that the model must not suffer from serial correlation. That is, no autocorrelation must exist with the error terms, data should not have heteroscedasticity. This implies that the variances and means must be constant over time, and the data in question must follow normal distribution. Finally, cumulative sum (CUSUM) test was also employed to know the fitness of the model. The study conducts four diagnostic tests using normality test, serial correlation LM test, heteroscedasticity test, and cumulative sum (CUSUM) test to fulfill all these conditions.

3.3. Scope of the Study and Variable Operationalization

The study spans from 1981 to 2023. The variables employed in the model are operationalized alongside their sources in Table 3:

Table 3. Variable and Source

Variables	Measures of the Data	Sources of Data
GDPG	Annual percentage growth rate of GDP at market prices based on constant local currency	CBN Bulletin (2023)

M_2	Broad money supply as a percentage to GDP	CBN Bulletin (2023)
INF	Change in Consumer Price Index as a percentage of GDP	CBN Bulletin (2023)
INT	Prime lending rate	CBN Bulletin (2023)
CPS	Credit to private sector as a percentage to GDP	CBN Bulletin (2023)

Source: Author's compilation

4. Results and Discussion

This section begins with descriptive statistics of the variables. This is followed by the time series property using test statistics of Augmented Dickey Fuller (ADF) to provide the basis for the analysis was also considered.

4.1. Descriptive Analysis

Table 4 reports the descriptive values of all the variables employed and shows that the mean value of GDPG, INF, INT, MS_2, and CPS is 10.17, 2.89, 2.90, 6.90, and 5.15, respectively.

Table 4. Descriptive Statistics

	GDPG	INF	INT	MS_2	CPS
Mean	10.17	2.89	2.90	6.09	5.15
Maximum	11.35	4.16	3.38	10.88	8.13
Minimum	9.08	1.44	2.80	2.17	1.66
Std. Dev.	0.71	0.68	0.45	2.38	2.47

Source: Author's compilation

The series that measures the level of discrepancy as shown in the standard deviation result is MS_2, while INT shows the lowest level.

4.2. Unit Root Test

Table 5 reveals the result of the unit root; it shows that variables such as INF and INT were integrated at order zero, while GDPG, MS_2, and CPS were found stationary at first difference.

Table 5. Unit Root Test

Variable	Critical value	ADF t-statistics @Level	@ First Diff.	Order of integration
GDPG	-2.883	-1.63	-18.11	I(1)
INF	-2.883	-2.89	-3.89	I(0)
INT	-2.883	-3.03	-3.64	I(0)
MS_2	-2.883	-0.98	-4.19	I(1)
CPS	-2.883	-1.45	-7.32	I(1)

Source: Author's compilation

The result of the unit root provides the basis for the study to use autoregressive distributed lag for both short- and long- run estimation of the model.

4.3. ARDL Estimation

Table 6 reveals the lag selection criterion suggested by LR, FPE, AIC, SC, HQ. The result shows that the optimum number of lag suitable for this analysis is 1. The suggestion is taken into consideration when analyzing ARDL model.

Table 6. Lag length selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-91.47	-	5.44	5.13	5.83	-5.61
1	145.89	361.77*	1.30	-5.38*	-2.90*	-4.33
2	238.03	89.90	3.71	-6.61	-2.11	-5.19
3	323.45	75.43	9.92*	-9.27	-2.39	-6.99*

Source: Author's compilation

Note: * *Indicates the selected lag order by criterion, Likelihood Ratio test (LR), Final Prediction Error criteria (FPE), Akaike Information Criteria (AIC), Schwarz Information Criteria (SC) and Hanna-Quinn Information Criterion HQ.*

The bounds test result in Table 7 shows that the F-statistic (68.9) approximately is beyond all the significance levels. It, therefore, indicates clearly the long-run relationship among the variables.

Table 7. ARDL result

Model	**F-statistic**	**No. of regressors (K)**
f (INF, INT, MS2, CPS)	68.91	4
Bounds test result		
Significance	**I(0) Bound**	**I(1) Bound**
10%	1.89	2.82
5%	2.31	3.20
2.5%	2.61	3.56
1%	2.79	3.81

Source: Author's compilation

Table 8, Panel A explains the short-run relationship between financialdevelopment andeconomic growth of Nigeria. Firstly, the significance of error correction mechanism (ECM) result and the negative sign of the coefficient lend credence to the establishment of co-integration among variables in this study. This coefficient indicates –0.69 and suggests that about 69% of previous year disequilibrium is corrected in the current year. Hence, the ECM adjusts rapidly to changes in the long run.

Table 8. ARDL estimation

Variable	**Coefficient**	**t-statistic**	**Prob.**
Long-run relationship			
INF	-0.045	-3.623	0.000
INT	0.632	1.949	0.041

MS_2	0.527	0.201	0.124
CPS	0.063	1.731	0.051
-Const	9.511	9.034	0.000
Short-run relationship			
D(INF)	-0.027	-2.991	0.001
D(INT)	0.316	1.993	0.050
D(MS_2)	0.106	0.059	0.371
D(CPS)	0.047	3.283	0.000
CointEq(-1)	-0.691	-19.042	0.000

Source: Author's compilation

In terms of the signs and magnitude of the coefficients, the long-run result indicates that inflation is negative and significantly related to gross domestic product growth (economic growth). The result shows that a unit increase in inflation will lead to 0.045 units decrease in GDP growth. The coefficient of interest rate and financial development (proxied by CPS-GDP ratio) exert a positive and significant effect on gross domestic product growth. The result shows that a unit increase ininterest rate and financial development will lead to 0.632 and 0.063 units increase in GDP growth, respectively. The coefficient of MS_2has a positive but insignificant effect on gross domestic product growth 0.527units.

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4.4. Causality Analysis

Table 9 indicates the causality test result conducted to examine the casual relationship among the variables. Evidence from this result shows no causal relationship between inflation and gross domestic product growth, while unidirectional relationship was found between interest rate and gross domestic product growth, between broad money supply and gross domestic product growth, and between financial development (proxied by CPS – GDP ratio) and gross domestic product growth.

Table 9. Causality result

Direction	Observation	F-statistic	Prob.
INF→GDPG		0.420	0.721
GDPG→INF	43	0.632	0.534
INT→GDPG		12.641	0.000

GDPG→INT	43	0.292	0.510
MS_2→GDPG		32.734	0.000
GDPG→ MS_2	43	0.643	0.437
CPS→GDPG		9.437	0.000
GDPG→ CPS	43	0.606	0.187

Source: Author's compilation

The direction of the flow comes from interest rate, broad money supply. financial development, to gross domestic product growth. Meaning that financial development is granger causing economic growth, but economic growth does not granger cause financial development.

Diagnostic Analysis

Table 10 presents the post-estimation test to examine the suitability of the model using serial correlation LM test, normality test, and heteroscedasticity test. From the three estimates, variables are normally distributed; there is no problem of serial correlation and the variables show homoscedasticity.

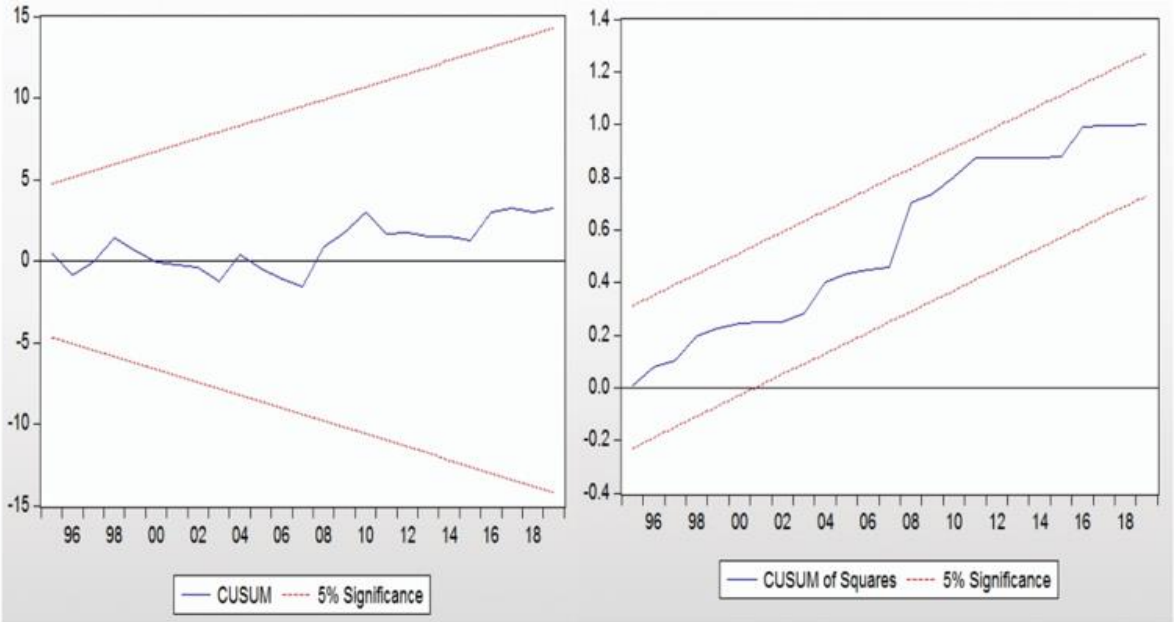
Table 10. ARDL diagnostic estimation

Statistics	Value	Prob.
Normality test		
Jarque-Bera	0.720	0.833
Serial correlation LM test		
Obs*R-squared	3.861	0.193
Heteroskedasticity test		
Obs*R-squared	14.952	0.176

Source: Author's compilation

In an attempt to ensure that the ARDL model is well fitted, the study employs cumulative sum (CUSUM) test. The test decision is that, if the plot ted CUSUM statistics lies within 5% significance level, the coefficient estimates are accepted.

Figure 2. CUSUM plot



Source: Author's compilation

Figure 2 shows that the CUSUM plot falls within the 5% level of significant (indicated by the two red lines). This shows that the model is stable and not spurious.

4.5. Discussion of Findings

The empirical analysis showed several findings. The study findings shows that the coefficient of interest and credit to private sector exert a positive and significant effect on gross domestic product growth the result shows that a unit increase in interest and credit to Private sector will lead to 0.316 and 0 047 unit increase in gross domestic product growth, respectively. The findings corroborate those of previous studies such as Monogbe et al. (2016), Zaheer et al. (2022), Luintel et al. (2016), Ngogang (2015), as well as Ibrahim and Alagidede (2018). However, our findings contrast some previous studies including Nguyen et al. (2019), Demetriades and Rousseau (2016), Iheanacho (2016), as well as Samargandi et al. (2015).

The study also found that in the long run Inflation is negative and significantly related to gross domestic product growth (economic growth) the result shows that a unit increase in inflation will lead to 0.045 units decrease in gross domestic product growth. There are several reasons for this trend in inflation. This is possibly as a result of inflation reducing investments, distorting prices and creating uncertainty, which in the long run will adversely impact economic growth. The study also reveals that the coefficient of broad money supply has a positive but insignificant effect on gross domestic product growth.

The Granger causality analysis shows that no causal relationship between Interest and gross domestic product growth while unidirectional relationship was found

between broad money supply and gross domestic product growth and between credit to private sector and gross domestic product growth.

5. Conclusion

In conclusion, this study provides empirical evidence supporting the positive impact of financial development on economic growth in Nigeria between 1981 and 2023, with variations in the short-run and long-run effects. The bidirectional causality observed in some cases highlights the interdependence between the financial sector and economic performance. To maximize the growth-enhancing effects of financial development, policymakers must implement reforms that strengthen financial institutions, promote financial inclusion, ensure financial stability, facilitate productive investments, and address structural bottlenecks.

By fostering a well-functioning financial system, Nigeria can achieve sustainable economic growth, enhance macroeconomic stability, and improve the overall standard of living. However, achieving these objectives requires a holistic approach that combines sound financial policies, technological innovations, and institutional reforms. Future research should continue to explore the evolving dynamics of financial development and economic growth in Nigeria, particularly in the context of emerging financial technologies and global economic uncertainties.

This study contributes to the growing body of literature on financial development and economic growth by providing empirical evidence on the Nigerian economy using the ARDL methodology. Unlike previous studies that often rely on traditional linear models, the use of ARDL bounds testing allows for a more robust analysis of both short-run and long-run dynamics. Additionally, the study extends the literature by incorporating multiple financial indicators, thus offering a more comprehensive understanding of how different dimensions of financial development influence economic growth.

The findings reinforce the argument that financial development is a crucial determinant of economic growth in developing economies. However, they also highlight the complexities and challenges associated with achieving an optimal finance-growth relationship. By examining the causal linkages between financial development and economic growth, the study provides insights into the dynamic interplay between these variables, which can inform policy formulation and implementation.

While this study provides valuable insights, it is not without limitations. First, the study primarily focuses on aggregate financial indicators, which may mask sector-specific dynamics. Future research could explore the disaggregated impact of financial development across different sectors of the economy to provide more targeted policy recommendations.

Second, the study relies on historical data, which may not fully capture emerging trends in Nigeria’s financial sector, especially with the rise of fintech innovations

and digital finance. Future research could incorporate alternative data sources, such as real-time financial transactions and big data analytics, to provide a more dynamic assessment of financial development.

Third, the study does not explicitly account for external factors such as global financial shocks, trade policies, and geopolitical risks, which can influence the finance-growth relationship. Future studies could adopt a global perspective by incorporating international financial integration, foreign direct investment (FDI) inflows, and external debt dynamics into the analysis.

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