

Effect Of Financial Intermediation On Economic Growth In Nigeria

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Abstract: The study examined effect of financial intermediation on economic growth in Nigeria from 1986 to 2023. The study employed autoregressive distribution lag (ARDL) model and pairwise granger causality test as estimated technique, the result revealed that all variable (LNMS, LNLN, LNCPS and LNINF) has an insignificant impact on RGDP in the long run. Also, it was revealed that money supply, lending rate and inflation rate has a negative effect on real gross domestic product in the long run while credit to private has a positive effect on real gross domestic product in the long run. Also, result revealed a causal relationship between financial intermediation and economic growth in Nigeria. Evidence from the result revealed that there was no relationship between LNMS to LNRGDP, also, there was a unidirectional relationship from LNRGDP to LNLN. Also, there was a unidirectional relationship from LNRGDP to LNCPS and lastly, there was no causal relationship between LNINF and LNRGDP and concluded that there was a bidirectional relationship between financial intermediation and economic growth in Nigeria. Therefore, recommended that; management of banks should be encouraged to pursue policies that will deepen the efficient allocation of financial services for economic growth in Nigeria; policymakers should consider the historical trends of banking intermediation metrics when shaping policies; continuous monitoring of these metrics is essential for anticipating shifts in economic growth trends; and Lastly, policy measures are recommended to enhance the efficiency of banking intermediation, focusing on credit allocation, currency management, and loan-to-deposit ratios.

Keywords: Money Supply, Lending Rate, Credit to Private Sector, Inflation Rate and Real Gross Domestic Product

Introduction

Financial intermediation is crucial for economic progress, according to most people worldwide (Olufemi, Muritala, Muhmmad, Yusuf, George & Oyegoke, 2024). This focus is appropriate since understanding the financial sector's role in economic development has significant regulatory implications. The Central Bank of Nigeria (2017) defines a nation's financial system as a collection of laws and regulations and a network of financial institutions, agents, and arrangements that interact with the global economy to promote it. Kolabowle (2020) states that efficient financial institutions increase economic efficiency, liquidity, savings, capital accumulation, resource shift from stagnant to dynamic areas, and skilled entrepreneurial reaction in dynamic areas. Financial systems' success shouldn't be taken for granted, particularly when data collection is key. Through a financial institution, lenders and borrowers trade cash indirectly. A bank transfers money from savers (lenders) to borrowers (spenders). Financial intermediation is when banks and non-banks convert mobilised deposit liabilities into assets or credits like loans and overdrafts, according to Adewole, Dare, and Ogunyemi (2019). Financial intermediaries lend savers' money to investors to boost economic growth (Manasseh, Okoh, Abada, Ogbuabor, Alio, Lawal, Nwakoby & Asogwa, 2021). Economic policy has traditionally focused on growing the economy, hence much study has been done (Iwedi & Wachuku, 2024). Most research have concentrated on theoretically or policy-relevant explanatory factors (Barro, 1991; Levine & Renelt, 1992). It's also clear that banks drive national economic growth. Iwedi & Igbani (2015) and Iwedi, Okey-Nwala, Ken-Ndubisi & Adamgbo (2016) state that banks' job in the financial system is to move capital from economically surplus to economically deficit areas. Whether loans with different maturities or contingent finance, Nzotta (2004) says these resources affect Nigeria's economic development. Iwedi and Wachuku (2024) observe that scholars have contested the link between economic development and banking system complexity. The financial system is meant to assist the economy grow, hence it may be influenced favourably or adversely by economic growth. Some experts believe banks should utilise their intermediary function to promote economic growth and advancement. Many economic actors need loans and other credit to fund their daily activities. Bank loans let farmers purchase agricultural supplies, corporations buy machinery and equipment, and governments pay recurring and capital expenses. Many individuals and families also use bank loans to acquire products and services. Banks' influence in Nigeria's economy has grown over time. According to the Central Bank of Nigeria Annual Report (2022), bank intermediation to the economy grew 18.7% in 2021. Increased credit distribution to the primary private sector maintains credit availability in the nation, a major social and economic benefit. These activities boost production, capital expenditures, and product and service output (Iwedi & Wachuku, 2024). Bank loans are projected to drive Nigeria's economic growth. Banks dominate the economy owing to their size, structure, asset distribution, deposit composition, and loan supplied to enterprises (Ezirim & Emenyonu, 1998). According to Soludo (2004) and Ekpenyong and Acha (2011), bank consolidation was justified by the notion that bigger

banks would be more stable, shock-resistant, and able to support the real sector, promoting economic growth. Banking is crucial to Nigeria's economic actors' money-making speed. Various government reforms have promoted a lively and efficient banking sector to increase domestic savings (capital creation) and constructive economic activity to strengthen the economy. Due to shifting economic indicators and occasional recessions like the 2020 worldwide pandemic and oil price shock, these financial development tactics generally fail. The National Bureau of Statistics reports modest real GDP growth with recent modifications. There's need an in-depth investigation of how financial intermediation influences Nigerian economic development.

Literature Review

Conceptual Literature

Financial Intermediation

Deposit money banks receive deposits and lend them to borrowers (Alhassan, Ogoja, Hannah & Nkemakonam, 2022). It established a credit mechanism to move monies from surplus to deficit economic operators. Government organisations, corporations, and individuals may borrow from savings or family money via these institutions. This intermediary function connects surplus fund and deficit unit owners, such as individuals, enterprises, and government agencies, who require funding for investment or other purposes. Through financial contract production, exchange, and finalisation, money, risk, resources, knowledge, and incentives may be more readily pooled, transferred, and finalised.

Money Supply

The money supply guarantees that public and private sector economic activities are well-liquidated, which affects economic development, according to Asuquo, Emefiele, Olugbemi, and Ita (2020). Private businesses may borrow money at an interest rate from the money supply. Monetary planners use money supply to enhance economic growth. On the other hand, the central bank utilises monetary policy to stabilise and expand the economy. According to Asuquo, Emefiele, Olugbemi, and Ita (2020), central banks use monetary policy to alter money and credit availability and cost to stabilise prices. The Nigerian Central Bank defines money supply as "narrow money" (M1) and "broad money" (M2). Its central bank role of managing the money supply to promote society has been consistent since 1959.

Lending Rate

According to Eze, Okoro, and Igbo-Anozie (2025), banks lend money to businesses at interest and financial firms lend mostly. Commercial banks offer loans to companies and other organisations in need of finance as middlemen. These loans might be short- or long-term. This helps them accomplish their objectives, including profit, which is why they were formed. Evaluations of major commercial banks' lending practices are complete. Some perspectives examined why banks lend to specific sectors, while others examined how such lending affects production and productivity. Deposit money bank credit is the lender's money given to the borrower. A deposit money bank's credit is a promise to return products and services or borrowed money. As middlemen, banks receive deposits from economically surplus units and lend them to economically deficit units that require production capital, defining credit. Thus, banks owe depositors and borrowers.

Credit to Private Sector

Government investing on infrastructure projects mitigates cyclical tax return patterns, firms may invest beyond their savings capacity, and credit creation boosts economic activity (Olanbye, Maku & Adelowokan, 2023). Credit availability and distribution to private investors and public sector agents are crucial to achieving macroeconomic objectives (Abina, 2020). Studies show that private sector lending drives investment and economic development by promoting growth, efficiency, innovation, and competitiveness (Alaba & Lawal, 2019). According to Keynesian theory, emerging nations need government economic oversight owing to the absence of private investment incentives and the predicted advantages of government expenditure. Domestic banks have boosted public sector loans as a consequence.

Inflation Rate

Inflation, an economy-wide price rise, may alter currency values (Ogu, Adagiri & Abdulsalam, 2020). A long-term price rise should affect all commodities and services in the economy. Inflation occurs when money exceeds goods and services. Currency buying power decreases with inflation. A fixed naira will only buy so much if inflation endures. N 10,000 would only purchase 5 shirts if shirt prices doubled in the following term. We must consider two aspects while discussing inflation. Start by understanding that inflation is a broad rise in prices that impacts the whole economy. Because of this, inflation cannot be defined by price rises alone or in aggregate. However, lowering one price might raise others. Nigerian oil prices are one example. Unless the basket price updates raise the overall price level, this is not inflation. For inflation to be real, prices must grow continuously. The overall price level must climb steadily over time.

Economic Growth

The economy grows as products and services output rises. Inflation-free calculations get the best outcomes (Kimberly 2019). GDP is ideal for measuring economic growth. All national economic production is considered. All products and services generated by domestic enterprises are included. No matter where the transaction happens, local or global. Nominal GDP and real GDP (GDP at constant prices) are used to assess economic growth. The government helps distribute loans to select economic sectors, supporting the finance-led theory of economic development (Alhassan, Ogoja, Hannah & Nkemakonam, 2022).

Theoretical Review

Theory of Financial Intermediation

Gurley and Shaw introduced financial intermediaries in 1960. Financial intermediaries were created due to high transaction costs, delayed information, and regulatory methods. Financial mediation studies differ in informational asymmetry discussions. This mismatch may produce moral hazard in the principal-agent relationship, adverse selection, and costly auditing and verification procedures or even execution for the debtor. Intermediaries improve economic well-being, according to Akintola and Adesanya (2021). To address the specific demands of savers and borrowers and minimise inefficiencies if fund users could borrow money from savers, financial intermediaries were needed. Finance is important to individuals, corporations, and other economic entities for many reasons. Financial services from many companies may provide the needed finance. Financial institutions include deposit money banks. They convert bank deposits into loans and credits via indirect financing, or financial intermediation. This entails transferring money from surplus to deficit areas. Some companies have amazing ideas and investment prospects but lack the funds to execute them. Loans are more likely to come from savers. These tertiary organisations are deficit entities or net borrowers in the economy. Some factors may prevent you from borrowing money. Net savers and net borrowers need a financial intermediary to eliminate this barrier. The word "financial intermediation" refers to shifting money from savers to investors or borrowers.

Supply Leading Theory

Schumpeter (1934) was the first to relate financial markets to economic development, a difficult subject in industrialised and developing nations. According to the supply-leading paradigm, financial sector expansion drives economic growth. This theory states that deposit money and commercial banks enable other areas of the economy shift resources effectively from surplus to deficit units and offer financial assets, liabilities, and associated services before demand.

Loan Pricing Theories

Stiglitz and Weiss developed this idea in 1981. According to the premise, banks often charge exorbitant interest rates. This approach holds that banks must optimise interest revenue while considering moral hazards and adverse selection in the lending market due to market knowledge asymmetry. When banks charge high loan rates, high-risk borrowers accept them, causing adverse selection. These loans and advances may cause borrowers to engage in moral hazard conduct since they are more prone to take risks.

Neoclassical Growth Theory

Solow and Swan introduced neoclassical theory in 1956. The neoclassical hypothesis states that capital, labour, and technology drive short-term economic growth. Technology, unlike capital and labour, sustains growth. Production function expression: $Y = F(K, L, T)$ represents production, capital (K), labour (L), and technology (T). Barro and Sala-i-Martin (2004) state that the neoclassical model assumes capital and labour are equivalent to a degree of one and that private inputs have diminishing returns, which are positive but decreasing. Beyond that, the marginal output of labour or capital approaches zero but approaches infinite. A successful outcome requires a positive number of input components. Solow (1999) suggests adding human capital, natural resources, endogenous population growth, technical advances, increasing and falling returns to scale, and more to the model without affecting its foundation.

Empirical Review

Eze, Okoro, and Igbo-Anozie (2025) investigated bank loans' influence on Nigeria's economic development from 1990 to 2023. The study employed the Histogram Normality Test, Autoregressive Distributed Lag Model, Augmented Dickey-Fuller Unit Root test statistic, and Johansen Co-integration test for estimation. Short-term (t-statistics: 6.9881; P-value (0.0029) > significance level (0.05)) and long-term (t-statistics: 4.9519; P-value (0.0029) > significance level (0.05)) results demonstrated that aggregate bank credit (BC) substantially and favourably influences economic growth. The bank interest rate has a negative and significant influence on economic growth in the long run but not in the short run (t-statistics: -1.2040; P-value (0.8400) > significance threshold (0.05). Since rising interest rates in Nigeria affect key economic sectors, the research advises that monetary authorities review their lending

policies by imposing stricter interest rate rules and monitoring bank rates. This should enhance output and capacity utilisation in these sectors.

Osuka, Otiwu, and Kalu (2024) examined Nigeria's money supply and GDP growth from 2000 to 2022. The autoregressive distributed lag (ARDL) model estimated that MS2 and CPS caused RGDP to rise and INF to fall. According to the research, Nigeria's money supply affects GDP growth significantly. Experts recommend the central bank tighten fiscal policy to enhance economic growth by lowering inflation. Increases in the money supply tend to boost economic growth, so proceed carefully.

Olufemi, Muritala, Yusuf, George, and Muhmmad (2024) evaluated financial intermediation's influence on Nigeria's economic development from 1987 to 2020. The Autoregressive Distributed Lag (ARDL) model estimate indicated a swift adjustment speed (Cointeq(-1) = (-0.9995; -0.981099) for the two models in the short term. The GDP model revealed a significant positive impact on Nigeria's economic development over time from private sector credit ($\beta_1 = 0.0121$), market capitalisation ($\beta_4 = 0.05423$), and total share trading ($\beta_5 = 1.62669$) at a 5% significance level. In contrast, lending rates ($\beta_3 = -0.14194$) and wide money supply ($\beta_2 = -0.00511$) negatively impacted economic growth in Nigeria at the same level. The PCI model analysis at 5% significance level revealed that private sector credit ($\beta_1 = 0.002216$), market capitalisation ($\beta_4 = 0.095095$), and total share trading volume ($\beta_5 = 1.915620$) significantly and positively impacted Nigeria's economic growth over time. Both lending rates ($\beta_3 = -0.313843$) and broad money supply ($\beta_2 = -0.008476$) negatively impacted economic growth in Nigeria at the same level of significance. We should encourage bank management to implement laws that streamline financial services distribution to boost Nigeria's economy.

Iwedi and Wachuku (2024) examined how banking intermediation affects Nigeria's economic growth from 1960 to 2022. Research estimates employed unit root testing, VAR models, and cointegration tests. Intermediation indicators of the banking sector are highly impacted by their lag values, which may hinder economic growth. More study employing Vector Error Correction Models (VECM) was advised to understand long-term dynamics and causal linkages. The study made four main recommendations: first, use VECM to thoroughly investigate relationship nuances; second, consider banking intermediation metrics' historical trends when making policy; third, monitor these metrics continuously to forecast economic growth trends; and fourth, improve banking intermediation efficiency, with a focus on currency.

Olannye, Maku, and Adelowokan (2023) examined private and governmental sectors in their 1981–2020 examination of domestic loans and economic development in Nigeria. The estimate technique included an Auto-Regressive Distributed Lag (ARDL) model, lag selection criteria, stationary tests, and inferential statistics. The data show that private sector loans promote GDP growth whereas state sector loans hardly register a blip. The analysis advised Nigeria's government against a uniform credit expansion strategy. Domestic credit policy should be sector-specific. Better government-business interaction is needed. To boost economic development, domestic credit needs effective risk management systems to monitor loans, particularly public sector ones.

Amali, Alymkulova, and Ejila (2023) evaluated digitisation, private sector bank loans, and Nigerian economic development from 2009 to 2021. They examined how digitisation moderated. The research used the Autoregressive Distributed Lag (ARDL) model to predict that private sector lending boosts Nigeria's economic development in the near run. Private sector loans boost Nigeria's economy over time, albeit only little. Digitalisation did not affect the association between bank private sector loans and economic development in Nigeria throughout the period under study. The Central Bank of Nigeria (CBN) is integrating digitalisation into the financial services sector, as deposit money banks are crucial for financial intermediation.

Alhassan et al. (2022) studied the impact of financial intermediaries on Nigeria's economic growth. The study estimated using multiple regression analysis and ex-post facto research. The data show that savings affect Nigeria's economic growth more than fixed deposits. Current accounts also shape Nigeria's economy. When deposit money institutions lend to small enterprises, economic growth has little influence. According to study, financial intermediation boosts Nigeria's economy. Thus, financial institutions were advised to combine resources and lend to real-economy enterprises. Financial sector regulators must continually liberate the industry to prevent systemic shocks.

Abere, Akosile, Adegoke, and Adebayo (2022) examined Nigeria's economic growth and financial intermediation from 1986 to 2020. The research indicated that financial intermediation ratio, market capitalisation, and transaction value substantially impact Nigerian economic development. Johansen cointegration and error correction were used to estimate. Financial intermediation may help Nigeria thrive economically. The research found that financial intermediation boosts Nigeria's economy. The Nigerian government should increase stock market capitalisation.

Financial intermediation's impact on Nigeria's GDP growth from 2011 to 2020 was examined by Orenuga and Oyedokun (2022). The study's Ordinary Least Squares (OLS) analysis found that government spending and credit have increased the Nigerian economy, not consumer deposits or liquidity reserves. Financial intermediaries can boost the Nigerian economy by lending more to MSMEs and other real economy projects. Regulators should encourage financial intermediaries to cut borrowing rates to boost productivity. Nigeria will provide adequate electricity, security workers, and improved roads to assist banks save money on alternative power

sources and branch security. For economic development, the government should prioritise capital investment above continuing spending. The government should make starting a firm easier to boost economic development.

Yakubu, Abokor, and Balay (2021) examined Turkey's economic development and financial intermediation from 1970 to 2017. Financial intermediation affects economic development in the short and long run, according to a research using the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM). As the supply-leading argument shows, the impact is only short-term positive. Financial openness boosts long-term economic development, even if gross fixed capital creation only counts in the short term, when adjusting for other variables. The study shows that inflation slows economic growth regardless of time. The government should provide incentives to local investors to support domestic investment and growth. Policymakers must implement effective measures to limit inflation. It will enable economic development in the near and far future.

Manasseh, Okoh, Abada, Ogbuabor, Alio, Lawal, Nwakoby, and Asogwa (2021) examined how financial intermediation affects Nigerian economic development from 1994 to 2018. The research employed Ordinary Least Squares (OLS) estimate. Deposits positively affect per-capita GDP, with 0.244193 percent growth for every one percent increase in deposits. The study shows that bank loans boost economic development. A negligible impact was seen. The research found that bank liquidity reserves boosted economic development. The report recommended legal changes to improve Nigeria's banks, which are vital to economic development.

Inflation hampered Nigeria's economic growth from 1999 to 2017, according to Ogu, Adagiri, and Abdulsalam (2020). The Ordinary Least Squares (OLS) regression analysis found that interest rates adversely impact Nigerian economic development. One-digit interest rates, consumer-influencing policies, and effective tax policies were among the numerous suggestions.

Research Method

The model for this study is built based on the modification of the study carried out by Akinola and Adesanya (2021) which stated below as;

$$RGDP = f(MS, LR, CPS, INF)$$

This can be stated in the econometric form as;

$$RGDP = \beta_0 + \beta_1 MS + \beta_2 LRT + \beta_3 CPS + \beta_4 INF + \mu$$

Where;

RGDP = Real Gross Domestic Product

MS = Money Supply

LR = Lending Rate

C = Credit to Private Sector

INF = Inflation Rate

β_0 = Intercept

β_1 - β_4 = Slope of the variables

μ = Stochastic error term which represents other independent variables not included in the model

Data Analysis and Interpretation

Taking into consideration different integration orders, this research examined the long-term effects of financial intermediation on Nigerian economic development from 1986 to 2023 using the Auto Regressive Distributed Lag (ARDL) model. The research model's dependent variable was economic growth, or Real Gross Domestic Product (RGDP). Money supply, lending rate, private sector credit, and inflation rate explained the data. The ARDL methodology includes short-run outcomes that the OLS method tries to describe, hence the findings will be analysed using the Unit Root Test instead of OLS. This section of the study just covers the findings.

Data Presentation

The raw and log-linearised data used in the study were secondary data spanning from 1986 to 2023 culled and analysed, and are duly presented as shown in the table below.

Test for Stationary of Variables (Unit Root Test)

Time series data is normally considered stationary, but the Augmented Dickey-Fuller Unit Root Test (ADF URT test) must be done to confirm. The test is done to avoid false regression. This hypothesis will test if the study model's variables are stationary:

H_0 : X has a unit root i.e. data is non-stationary

H_1 : X has no unit root i.e. data is stationary

Decision Rule:

To reject the null hypothesis and accept the alternative hypothesis, the absolute value of the ADF test statistics must exceed the 5% Mackinnon Critical Value, regardless of sign. If H_0 is true and H_1 is false, H_0 is accepted.

Augmented Dickey-Fuller Unit Root test

Table 1: Result of ADF Unit Root Test at Level

Variable	ADF Statistical value	Mackinnon Critical Value	H_0	H_1	Remark
LNRGDP	-4.112557	-2.943427	Reject	Accept	Stationary
LNMS	-2.559239	-2.943427	Accept	Reject	Non-Stationary
LNL	-3.920683	-2.943427	Reject	Accept	Stationary
LNCPS	-1.815316	-2.943427	Accept	Reject	Non-Stationary
LNINF	-3.910537	-2.945842	Reject	Accept	Stationary

Source: Author's computation using E-views 10 (2025)

Table 1 demonstrated that LNRGDP, LNL, and LNINF were stationary before first differencing since their ADF statistic values above the MacKinnon critical threshold at 5% significance. For LNRGDP, LNL, and LNINF, the alternative hypothesis is accepted and the null hypothesis rejected. First differencing is needed to establish variable stationarity as other variables were non-stationary at the level. Therefore, the table below indicates the accurate outcome of the original difference.

Table 2: Result of ADF Unit Root Test at First Difference

Variable	ADF Statistical Value	Makinnon Critical Value	H_0	H_1	Remark
D(LNMS)	-4.162908	-2.945842	Reject	Accept	Stationary
D(LNCPS)	-4.482435	-2.945842	Reject	Accept	Stationary
D(LNCAP)	-4.608537	-2.948404	Reject	Accept	Stationary

Source: Author's computation using E-Views 10 (2025)

Table 2 indicated that LNMS and LNCPS are stable at first difference because the ADF statistics above the MacKinnon critical value at the 5% absolute significance level. Thus, we reject the null hypothesis and accept the alternative hypothesis for variables.

Summary of Order of Co-integration

The summary of the Augmented Dickey Fuller (ADF) unit root test is presented in the table 3 below:

Table 3: Summary of Order of Integration

Variable	Order of Integration
LNRGDP	I(0)
LNMS	I(1)
LNL	I(0)
LNCPS	I(1)
LNINFR	I(0)

Source:- Author's computation using E-view 10 (2025)

Due to the mixed order of integration in Table 3, the Auto Regressive Distributed Lag (ARDL) model is needed to study the long-term association between variables instead of the co-integration test.

The Augmented Dickey Fuller Test Equations

Table 4 shows the ADF test findings, variables' relative degrees of stationarity, delayed periods, and multiple determination coefficients.

Table 4: Result of ADF Test Equation on Variables at their Stationary Point

Variable	Coefficient	Standard Error	T-Statistics	Probability	R ²
LNRGDP(-1)	-0.029414	0.007152	-4.112557	0.0002	0.325797
C	0.467499	0.068866	6.788579	0.0000	
D(LNMS(-1))	-0.674163	0.161945	-4.162908	0.0002	0.337617
C	0.146103	0.039584	3.691006	0.0008	
LNLR(-1)	-0.536718	0.136894	-3.920683	0.0004	0.305166
C	1.551720	0.394891	3.929490	0.0004	
D(LNCPS(-1))	-0.741097	0.165334	-4.482435	0.0001	0.371444
C	0.160993	0.045949	3.503764	0.0013	
LNINF(-1)	-0.583395	0.149186	-3.910537	0.0004	0.322221
C	1.597584	0.413575	3.862862	0.0005	

Source: Author's Computation using E-views 10 (2025)

ARDL Bound Test Approach to Co-integration

The study used Pesaran, Shin, and Smith (2001)'s limits testing technique to the ARDL framework and examine co-integration to find long-term equilibrium. The following assumption will guide our investigation:

H₀: There is no co-integration among variables

H₁: There is co-integration among variables

Decision Rule:

The model's F-Statistics must exceed the test result's upper limit at 5% significance to show co-integration. Thus, the alternative hypothesis, which shows co-integration between variables across time, is accepted when the F-Statistics surpasses the upper limit at the 5% significance level, but the null hypothesis is not. Table 5 and the table below summarise the co-integration analysis findings.

The Schwarz Information Criterion selected this study's ARDL (1, 0, 1, 1, 0, 1) model.

Table 5: Co-Integration Result

F-Statistics	Lower Bound (5%)	Upper Bound (5%)
57.75555	2.56	3.49

Source: Author's Computation using E-views 10 (2025)

A steady long-run equilibrium connection between the variables in Table 5 supports the alternative hypothesis (F-Statistics > 5% essential value), thus we may accept it. Therefore, we describe the long-term partnership below.

Long Run Result

The ARDL model's long-term results are shown in Table 6:

Table 6: Long Run Result of the Model

Dependent Variable: LNGDP

Variable	Coefficient	Std. Error	T-Statistics	Prob.
LNMS	-23.53033	229.3647	-0.102589	0.9189

LNLN	-13.78224	126.1395	-0.109262	0.9137
LNCPS	24.67558	231.8184	0.106444	0.9159
LNINF	-10.28279	94.00919	-0.109381	0.9136

Source: Author's Computation using E-views 10 (2025)

From the table 6 above, the long run equation specifying the long run relationship among the variables can be presented below as:

$$RGDP = 53.82687 - 23.53033_{LNMS} - 13.78224_{LNLN} + 24.67558_{LNCPS} - 10.28279_{LNINF} + \mu$$

$$(467.2299) \quad (229.3647) \quad (126.1395) \quad (231.8184) \quad (94.00919)$$

Note: The standard error statistics are those stated in parenthesis

The long-run equation shows a 16.502035-unit positive and negligible association between total debt stock and GDP. This suggested that a unit increase in debt stock would improve GDP by 16.502035 units over time. Debt service payments also had a negative and statistically insignificant relationship with GDP, measuring -3.596376 units. Long-term GDP declines by -3.596376 units for every unit increase in debt service payments. There was also a positive but minor correlation between the exchange rate and GDP of 1.126490 units, implying that a one-unit exchange rate rise would have a long-term beneficial impact on GDP. GDP and gross fixed capital formation had a negative and negligible long-term association of -12.360270 units. GDP falls by -12.360270 units for every unit increase in gross fixed capital formation. However, GDP was 2.590672 units higher when inflation was 1 unit higher, demonstrating a positive but modest association. Over time, a 1 unit increase in inflation would boost GDP by 2.590672 units. A positive value of 0.008532 showed how rapidly the Error Correction Model (ECM) corrects deviations from long-run equilibrium in the current era. Here, RGDP reacts substantially to model explanatory variable changes.

Granger Causality

Table 7: Causality Result

Causality Result:	Obs	F-Statistic	Prob.
LNMS does not Granger Cause LNRGDP	36	2.89114	0.0706
LNRGDP does not Granger Cause LNMS		1.52054	0.2345
LNLN does not Granger Cause LNRGDP	36	0.16572	0.8480
LNRGDP does not Granger Cause LNLN		6.49823	0.0044
LNCPS does not Granger Cause LNRGDP	36	0.16452	0.8490
LNRGDP does not Granger Cause LNCPS		4.59198	0.0179
LNINF does not Granger Cause LNRGDP	36	2.64234	0.0872
LNRGDP does not Granger Cause LNINF		2.49622	0.0988

Source: Author's Computation using Eviews 10 (2025)

Table 7 shows the causality test findings for financial intermediation and economic development in Nigeria from 1986 to 2023. The findings revealed financial intermediation boosted Nigeria's economy. A one-way association between LNRGDP and LNLN was found, but not between LNMS and LNRGDP. A one-way roadway links LNRGDP with LNCPS. LNINF and LNRGDP are not directly related, although financial intermediaries affect Nigeria's economic development.

Test for Statistical Significance of Parameters in the Short Run (Probability Test)

Probability tests will assess the study's variables' statistical significance. The variables' probability values are taken from ARDL short-run findings.

Decision Rule:

A variable is statistically significant if its probability value is less than 0.05 and insignificant if it is greater.

Table 8: Probability Test Long Run

Independent variable	Coefficient probability	Probability value	Decision
LNMS	-23.53033	0.9189	Insignificant
LNLR	-13.78224	0.9137	Insignificant
LNCPS	24.67558	0.9159	Insignificant
LNINF	-10.28279	0.9136	Insignificant

Source: Author's Computation using E-views 10 (2025)

Table 8 shows that LNMS, LNLR, LNCPS, and LNINF have a minimal long-term effect on RGDP. Additionally, money supply, lending rate, and inflation adversely influence long-term real GDP, whereas private sector credit positively affects it.

Diagnostic and Stability Test

Diagnostic and stability tests are performed in many ways to assess the model's dependability, stability, and robustness. The diagnostic package includes normality, heteroskedasticity, and serial correlation (autocorrelation) tests.

Serial Correlation Test

This research employed the Breusch-Godfrey Serial Correlation Lagrange Multiplier (LM) test to detect residual serial or autocorrelation. Asteriou and Hall (2011) say the LM test properly assesses error autocorrelation. This study tests serial correlation in its model using the following hypothesis:

H_0 : There is no serial correlation

H_1 : There is serial correlation

Decision Rule:

If the F-Statistic P-Value is more than 5%, the alternative hypothesis is accepted and serial correlation is absent; otherwise, the null hypothesis is accepted.

Table 9: Result of the Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.652641	Prob. F(2,29)	0.2091
Obs*R-squared	3.785617	Prob. Chi-Square(2)	0.1506

Source: *Eviews 10* (2025)

Table 9 shows an F-Statistics value of 1.652641 and a P-Value of 0.2091 (>5%). Thus, we accept the null hypothesis of no autocorrelation. The model may be used to draw conclusions and suggest beneficial policies.

Heteroskedasticity Test

Heteroskedasticity tests are used in data analysis. Testing for heteroskedasticity, which happens when error variance changes across data, is essential to prevent the estimated standard error being too big or small. Hendry (1995) claims this might lead to incorrect findings. The heteroskedasticity test is supported by the following hypothesis:

H_0 : There is no heteroskedasticity in the model

H_1 : There is heteroskedasticity in the model

Decision Rule:

Without heteroskedasticity, the null hypothesis is accepted if the F-statistic probability value is greater than 5%. If less than 5%, the alternative hypothesis is adopted.

Table 10: Breusch-Pagan-Godfrey Heteroskedasticity Test Result

F-statistic	1.099391	Prob. F(5,31)	0.3806
Obs*R-squared	5.572720	Prob. Chi-Square(5)	0.3500
Scaled explained SS	4.731478	Prob. Chi-Square(5)	0.4495

Source: *Eviews 10* (2025)

An F-statistic of 1.099391 and a probability value exceeding 5% at 0.3806 are the results of the white heteroskedasticity test in Table 10. Since the null hypothesis that there is no such entity is accepted, heteroskedasticity in the model is accurate.

Normality Test

Hair (2010) recommended a linear, normally distributed model for resilience. The Jarque-Bera statistic from the normality test proved the variables were normal. Therefore, the test's hypothesis is:

H_0 : Data is normally distributed

H_1 : Data is not normally distributed

Table 11: Normality Test Result

Jarque-Bera	3.245031	Prob. Value	0.197402
Skewness	0.694497		

Source: *Eviews 10* (2025)

Table 11 revealed that the Jarque-Bera statistic is 3.245031 with a probability value of 0.197402, confirming the null hypothesis and a normal distribution. Skewed data between -1 and +1 follows a normal distribution.

Summary of the Research Findings

This research objectively examines financial intermediation's impact on Nigeria's GDP growth from 1986 to 2023. Everything except real GDP, loan rate, and inflation rate were stationary at first difference when the Augmented Dickey-Fuller Unit Root Test was employed to test variable stationarity. Due to heterogeneous integration of variables at different stationarity levels, the Auto Regressive Distributed Lag (ARDL) approach was employed to estimate the long-run equilibrium relationship. A strong long-term link between variables was revealed utilising ARDL Bounds testing for co-integration. According to the ARDL long-run model, none of the four variables (LNMS, LNLIR, LNCPS, and LNINF) substantially impact RGDP over time. Additionally, money supply, lending rates, and inflation rates adversely influence long-term real GDP, whereas private sector credit favourably affects it. Over time, all elements appeared to match expectations. Diagnostic and stability tests evaluated the model's reliability and robustness. Stability, normal distribution, functional relationships, heteroskedasticity, serial or autocorrelation, and heteroskedasticity were tested. This was done using the Breusch-Godfrey Serial Correlation LM and Breusch-Pagan Godfrey tests. Check normality and heteroskedasticity. The data followed a normal distribution and had no autocorrelation, functionality, instability, or heteroskedasticity issues. The study's results may help you make informed selections and recommendations.

Implications of Research Findings

To stabilise Nigeria's economy, this article will explore monetary policy. Contrary to Osuka, Otiwu, and Kalu (2024), the Auto Regressive Distributed Lag (ARDL) model demonstrated a negative and statistically insignificant long-term connection between money supply and real GDP in Nigeria. Thus, a unit increase in money supply decreases real GDP. According to Eze, Okoro, and Igbo-Anozie (2025), the loan rate has a negative and small link with real GDP, but not the long term. This shows that a unit rise in the loan rate would lower real GDP over time. This analysis demonstrated a positive but statistically insignificant long-term association between private sector credit and real GDP, consistent with Manasseh et al. (2021) and Olannye et al. (2023). This means that private sector lending will ultimately boost real GDP. Long-term inflation and real GDP have a slight negative association. Real GDP falls with every unit of inflation. Yakubu, Abokor, and Balay (2021) and Ogu, Adagiri, and Abdulsalam (2020) obtained similar results. Financial intermediation also helped Nigeria's economy, according to paired Granger causality research. The findings reveal that LNMS and LNRGDP are unrelated despite a one-way relationship. A one-way relationship exists between LNRGDP and LNCPS. LNINF and LNRGDP are not directly connected, although financial intermediation and economic growth in Nigeria are. All variables met a priori assumptions simultaneously. Real GDP had a long-term positive but minor link with private sector credit, as expected, but a negative correlation with money supply, lending rate, and inflation. The LM correlation test, heteroskedasticity test, normality test, stability test, and functionality reset test show that the results accurately depict Nigerian financial intermediation and economic development.

Conclusion and Recommendations

Taking into consideration different integration orders, this research examined the long-term effects of financial intermediation on Nigerian economic development from 1986 to 2023 using the Auto Regressive Distributed Lag (ARDL) model. The research model's dependent variable was economic growth, or Real Gross Domestic Product (RGDP). Money supply, lending rate, private sector credit, and inflation rate explained the data. The findings reveal that LNMS, LNLN, LNCPS, and LNINF do not alter RGDP over time. Furthermore, private sector credit favourably influences real GDP whereas money supply, lending rates, and inflation rates adversely affect it. The pairwise Granger causality analysis also found that LNRGDP favourably linked with LNLN and negatively with LNMS. It was also one-way between LNRGDP and LNCPS. LNINF and LNRGDP were uncorrelated, showing a two-way relationship between financial intermediaries and Nigeria's Economy. The study recommends the following policy initiatives to improve banking intermediation efficiency: legislators should consider the historical trends of banking intermediation metrics when making policies; ongoing monitoring of these metrics is essential for predicting changes in economic growth patterns; and bank management should implement policies that improve the efficient distribution of financial services to spur.

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